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THE

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DEVOTED TO

MATERIA MEDICA, PHARMACY, CHEMISTRY, &c.

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Tonics.

BY CHARLES A. LEE, M. D.

NUMBER I.

TONICS are agents which invigorate organic actions. Many agencies do this indirectly, as blood-letting, cathartics, narcotics, diaphoretics, and counter-irritants; but true tonics either impart tone to the digestive organs by primary and local influence, or they so impress the vital properties of the different tissues through the medium of the blood, as to gradually and slowly exalt all the functions of the body. They may be supposed to generate as well as extricate nervous influence, on which depends the vigor of all the vital actions. Some of them, as chalybeates, supply an element essential to the composition of healthy blood; others, like cod-liver oil, act essentially as nutrients. Taken as a class, they influence all the vital properties, and hence are universal excitants to the functions. *Vegetable tonics*, with which we are now more particularly concerned, owe their influence to different organic constituents, as alkaloids, neutral principles, volatile oil, acids, resins, &c. They act both as stomachics and hæmatics, or blood remedies, forming in the stomach new combinations, which are absorbed and afterwards eliminated by the excretory organs. These proximate principles have often been detected in the blood and the different secretions. Like inorganic substances, however, this influence is partly reflex, especially those belonging to the class of pure bitters. In no instance do they operate upon mechanical and chemical principles, as was formerly supposed.

This class of remedies may be called permanent stimulants or alteratives, and their office is to restore impaired or lost function, and to enable organic nervous or vital power to resist the slow extension of disease, or aid nature in the establishment and progress of convalescence. Like all other medicines, they are relative agents, acting therapeutically only in certain morbid conditions and states of the system; misapplied, they are irritants or sedatives. No fact is better established than that tonics, as often used, prove indirectly debilitating, and counteract the recuperative forces. Errors in pathology lead to frequent misapplication of this class of remedies, especially the confounding apparent with true debility. The property of healthy excitability is confined within narrow limits; if exhausted by over-stimulation, the chances of recovery are materially lessened. In the administration of tonics, we aim to elevate depressed vital power, in a slow and gradual manner, to the healthy standard, aiding and imitating the natural recuperative energies by agents characterized, like the vital stimuli, by permanency of action. Remedial agents which restore the vital energies vary not only in grade, the rapidity and permanency of their action, but also in respect to the organ, system, or tissue, on which their influence is chiefly exerted. True tonics, however, seem to elevate equally all the functions; and by administering them in suitable doses, and at proper intervals, their beneficial influence is propagated throughout the entire system. As soon as one or more important functions are restored the rest participate in the change, and the whole assume a regular discharge of their offices, owing to a reciprocity of vital influence and function existing throughout the economy.

In applying this class of remedies, then, we should carefully investigate the causes of the existing debility, whether it be apparent merely or the consequence of oppressed instead of depressed vital power; whether it may not result from irritation in some part, thus abstracting due energy from others; whether simple or complicated, or associated with change of structure; and after subjecting the case to this pathological analysis, passing all the various functions and organs in review, we then have to decide upon the choice of agents best suited to the particular circumstances of the case. And here great judgment and discrimination are needed. Though closely allied in their remedial virtues, yet no two tonic agents possess identically the same therapeutical powers. Admitting the general rule that vegetable tonics are best suited to those prostrate conditions consequent on protracted acute diseases, and the mineral ones to chronic affections involving more especially the nervous system, and also that certain vegetable tonics possess an antiperiodic power not generally possessed by this group of remedies, we furthermore find that no two of the class possess identically the same properties, and hence we infer that none of them can well be spared from the materia medica. This might, in fact, be inferred a *priori*, from the consideration that in no two vegetables are the organic constituents the same. If they agree in kind, they differ in quantity. Some contain volatile oil or tannin, in connection with an alkaloid, neutral or bitter principle. In some the volatile oil, in others the tannic acid predominates; and in a third group the bitter principle is the prevailing power. Yet it is solely by experience and observation that these differences have been established. This variety of chemical composition, however, imparting as it does to this entire group compound attributes of a most important character, is a wise provision of nature to secure an equally corresponding variety of effects. In this belief, we shall pass in review, in our succeeding numbers, all our indigenous plants which are known to possess tonic properties: believing that it is better to have a large than a small catalogue of articles of this class to select from, we shall aid to extend rather than lessen their number.

In the use of tonic remedies the practitioner must ever bear in mind the paramount importance of the vital stimuli—food, air, water, heat, &c.—above all medicinal substances or pharmacological agents whatever: as on the former depends the renovation of all the tissues, leaving no exhaustion behind them. Pharmaceutical stimulants may excite reaction, but they probably never directly increase the vital force. If they accomplish this end, it is by enabling the vital stimuli to exert their wonted effects. This is well illustrated by the effects of friction, which acts as a vivifying stimulus, by exalting the vital properties of the part, drawing the blood to it, and inducing such vital and chemical changes as to facilitate the action of the vital stimuli. It is now, however, admitted by the best physiologists that there are some medicinal agents, which, under certain morbid conditions, do exert a local vivifying and strengthening influence upon the different organs of the body. Muller has suggested that this effect is produced by restoring the composition of the organ, or by so changing it as to facilitate renovation by the general vital stimuli; though he thinks such cases are rare. Paris has very truly observed that when the vital movements have been accelerated by a stimulant beyond a certain point the consequence will be a corresponding collapse, and that an interval must elapse before the exhaustion can be supplied; but it is not so with tonics, inasmuch as they act slowly yet progressively, so that time is allowed for the full operation of the vital stimuli to supply an influx of power, which shall, at least, equal the demand for it, and consequently no collapse can take place. But more than this is effected; for since the restorative functions necessarily partake of the general excitement, they will be urged with increasing activity, and thus the energies of every part be gradually and permanently increased, and the general standard of strength raised. To insure, however, this desirable result, Dr. Paris dwells upon the importance of so regulating the application of the vital stimuli, by a judicious system of medical training as to insure the full benefit of their revivifying influence. It would not be attended with any important practical results to speculate upon the manner in which these effects are brought about. We know that many of these agents, at least, promote the appetite and invigorate the digestive function, causing a greater quantity of food to be taken, and more thoroughly digested and appropriated to the wants of the system—thus enriching the blood, and rendering it more stimulating to all the functions, and more nutritive to the various tissues. Thus, indirectly, general tonic effects are produced, and probably by a local inflnence, on the digestive organs. Again we may believe, in accordance with known physiological laws, and ascertained facts, that they enter the blood vessels and modify the vital properties of the blood; perhaps, as has been suggested, entering into the composition of some of its proximate principles, and so influencing their vital condition as to favor the physiological actions constantly going on within it, contributing to its full development and maintenance, and so enabling it to perform its offices in the economy with more vigor and efficiency. That iron and cod-liver oil, &c., may act in this way, is not improbable; or we may suppose they sometimes operate, by their presence in the circulation, upon the ultimate organic constituents of the tissues, stimulating into increased activity that special power, which resides in the organic cells, or molecules of the organ. But whatever theoretical views may be adopted in regard to the *modus operandi* of tonics, no one can deny but that when cautiously and judiciously administered, in cases to which they are adapted, the most beneficial effects often follow.

Tonics may often be advantageously combined with other remedies. Those which have an astringent tendency, especially, should be combined with aperients, as first pointed out by the celebrated Hoffman: and to these an alkali will often prove a valuable adjunct. Too much attention cannot be paid to the state of the secretory and excretory organs, for torpidity of function here is itself a direct producing cause of debility. Aloes, rhubarb, and blue mass fulfill this indication with sufficient certainty and efficiency. It should, however, be recollected that while much purgative action counteracts the effect of the tonic, a small quantity of a bitter tonic increases very much the purgative power of a cathartic drug. Some writers have advised the combination of tonics with narcotics, but there are few cases where such union would be advisable. There may be such a condition of the stomach as not to tolerate well the presence of tonics, which may be obviated by an opiate, as in some instances of intermittent fever. It is still customary among *gourmands*, in some countries, to take, after eating, a pastile composed of opium, cloves, mace, nutmeg and musk, the compound being found to favor instead of checking digestion. Dr. Tully has very properly called attention to the fact that, in order that many of the tonics should sit well upon the stomach, and affect the patient agreeably, it is well to accompany their use with some light, nutritious, and easily digestible food, such as milk or rice porridge, arrowroot and milk, &c.

The dose, the intervals between the doses, and the duration of the tonic treatment, must be determined by the peculiar circumstances of each case.

The following list, it is believed, embraces nearly all known North American plants possessing tonic virtues. In some—perhaps many—the tonic property does not predominate, but is allied with astringent, stimulant, diaphoretic, alterative, or other qualities. In few does it exist unconnected with other virtues. Some, it will be observed, are included, which have already been enumerated in the class of astringents. Some, however, already noticed under that class have been here omitted. The list would have been much extended by including other species under the astringent genera, but no practical benefit would have attended it.

Our indigenous materia medica abounds more in astringents and tonics than any other class of remedies. So numerous are the former, that we may and should be entirely independent of foreign countries; and as to the latter, our continent furnishes everything necessary. The cinchona, and other aromatic barks of South America, added to the bitter tonics of the United States, furnish the practitioner as complete an armament of medicines of this class as can well be desired. That their virtues should be more thoroughly investigated by practical men is ardently to be desired. The nomenclature of Torrey and Gray has been adopted.

PLANTS INDIGENOUS TO THE UNITED STATES POSSESSING TONIC PROPERTIES.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Ranunculaceae, (*Crowfoot Family.*)	Hepatica.	H. Triloba.	Liverwort.
		Acutiloba.	Short-lobed Hepatica.
	Coptis.	C. Trifolia.	Gold Thread.
	Zanthorhiza.	Z. Apiifolia.	Yellow Root.
	Hydrastis.	H. Canadensis.	
	Actæa.	A. Spicata.	Baneberry—Cohosh.
		Va. Rubra.	Red Baneberry.
		Alba.	White Baneberry.
	Cimicifuga.	C. Racemosa.	Bugbane—Cohosh—Black Snake-Root.
		Americana.	American Bugbane.
Magnoliaceae, (*Magnolia Family.*)	Magnolia.	M. Glauca.	Sweet Bay.
		Acuminata.	Cucumber Tree.
		Macrophylla.	Great-leaved Mag. Tree.
		Umbrella.	Umbrella Tree.
		Fraseri.	Ear-leaved Umbrella Tree.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Magnoliaceae.	Liriodendron.	L. Tulipifera.	Tulip Tree.
Anonaceae, (*Custard Apple or Papaw Family.*)	Asimina.	A. Triloba.	Common Papaw, or Custard Apple.
Menisperm'ceae (*Moonseed Family.*)	Menispermum	M. Canadense.	Canadian Moonseed.
Nelumbiaceae, (*Nelumbo Family.*)	Nelumbium.	N. Luteum.	Water Chinquepin.
Nymphæaceae, (*Water Lily Family.*)	Nymphæa.	N. Odorata.	Sweet-scented Water Lily.
	Nuphar.	Advena.	Yellow Pond Lily.
		Kalmiana.	Spatter Dock.
Sarraceniaceae, (*Pitcher Pl'nts.*)	Sarracenia.	S. Purpurea.	Side-Saddle Flower, or Pitcher [Plant.
		Flava.	Trumpets.
Hypericaceae, (*St. John's Wort Family.*)	Hypericum.	H. Perforatum.	St. John's Wort.
Zanthoxylaceae	Zanthoxylum.	Z. Americanum.	Prickly Ash, or Toothache [Tree.
		Carolinianum.	
Vitaceae, (*Vine Family.*)	Vitis.	V. Labrusca.	Northern Fox Grape.
		Æstivalis.	Summer Grape.
		Cordifolia.	Winter, or Frost Grape.
		Vulpina.	Muscadine.
Rhamnaceae, (*Buckthorn Family.*)	Ceanothus.	C. Americanus.	New Jersey Tea, or Red Root.
Hippocastanaceae.	Aesculus.	Al. Glabra.	Ohio Buckeye.
		Flava.	Sweet Buckeye.
		Pavia.	Red Buckeye.
Aceraceae, (*the Maple Family.*)	Acer.	A. Pennsylvanica	Striped Maple.
		Saccharinum.	Sugar Maple.
		Nigrum.	Black Sugar Maple.
Polygalaceae, (*Milk Wort Family.*)	Polygala.	P. Senega.	Seneca Snake Root.
		Sanguinea.	
		Paucifolia.	Flowering Wintergreen.
		Rubella.	Bitter Polygala.
Leguminaceae, (*Pulse Family.*)	Trifolium.	T. Arvense.	Rabbit-Foot Clover.
		Pratense.	Red "
		Repens.	White "
Rosaceae, (*Rose Family.*)	Prunus.	P. Americana.	Wild Yellow or Red Plum.
		Maritima.	Beach Plum.
		Chicasa.	Chickasaw Plum.
		Spinosa.	Sloe—Black Thorn.
	Cerasus	C. Pumila.	Dwarf Cherry.
		Pennsylv'nica	Wild Red Cherry.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Rosaceae, (*Rose Family.*)		C. Virginiana.	Choke Cherry.
		Serotina.	Wild Black Cherry.
	Spiræa.	S. Opulifolia.	Nine Bark.
		Corymbosa.	
		Salicifolia.	Meadow Sweet.
		Tomentosa.	Hardhack.
		Lobata.	Queen of the Prairie.
	Agrimonia.	A. Eupatoria.	Common Agrimony.
	Geum.	G. Rivale.	Water or Purple Avens.
	Potentilla.	P. Norvegica.	Cinquefoil.
		Canadensis.	Five Finger.
		Argentea, &c.	
	Fragaria.	N. Virginiana.	Strawberry,
	Rubus.	R. Odoratus.	Purple Flowering Raspberry.
		Villosus.	High Blackberry.
		Canadensis, &c	Dewberry.
		Trivialis.	Low-bush Blackberry.
Calycanthaceae, (*Carolina All-spice Family.*)	Calycanthus.	C. Floridus.	Carolina Allspice.
		Lævigatus.	Sweet-scented Shrub.
		Glaucus.	
Umbelliferae, (*Parsley Family.*)	Sanicula.	S. Canadensis.	Sanicle—Black Snake Root.
		Marylandica.	" " " "
	Eryngium.	E. Aquaticum.	Button Snake Root.
		Fœtidum.	Fever Weed.
	Angelica.	A. Curtisii.	Angelica.
	Archangelica.	Hirsuta.	Archangelica.
		Atropurpurea.	Great Angelica.
		Peregrina.	
Cornaceae, (*Dogwood Family.*)	Cornus.	C. Florida.	Flowering Dogwood.
		Circinata.	Round-leaved Cornel.
		Sericea.	Silky Cornel.
		Stolonifera.	Red Osier Dogwood.
Cinchonaceae, (*Cinchona Family.*)	Cephalanthus.	Occidentalis.	Button Bush.
	Chiococca.	Racemosa.	Snow Berry.
	Pinckneya.	Pubens.	Fever Tree—Bitter Bark.
Hamamelaceae, (*Witch Hazel Family.*)	Hamamelis.	H. Virginica.	Witch Hazel.
Compositae, (*Composite Family.*)	Eupatorium.	E. Purpureum.	Joe Pye Weed—Trumpet [Weed.
		Perfoliatum.	Thorough Wort—Boneset.
		Teucrifolium.	Wild Horehound.
		Ageritoides.	White Snake Root.
	Erigeron.	Canadense.	Canada Flea Bane.
	Solidago.	S. Odora.	Sweet Golden Rod.
	Helenium.	H. Autumnale.	Sneeze Wort.
	Maruta.*	M. Cotula.	May Weed.
	Achillea.	A. Millefolia.	Yarrow.
	Cnicus*	C. Benedictus.	Blessed Thistle.

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* Introduced from Europe.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Compositae, (*Composite Family.*)	Hieracium.	H. Venosum.	Hawk Weed.
	Nabalis.	N. Fraseri.	Gall of the Earth.
	Tanacetum.	T. Huronensis.	Native Tansy.
	Artemesia.	A. Caudata.	Slender Wormwood.
		Ludoviciana.	Western Mugwort.
		Vulgaris.	Common " (exotic).
		Biennis.	Biennial "
	Senecio.	S. Aureus.	Life Root—False Valerian.
	Arnica.	A. Mollis.	Soft Arnica.
		Nudicaulis.	
	Onopordon.*	Acanthium.	Cotton Thistle.
Ericaceae, (*Heath Family.*)	Arctostap'ylos	A. Uva Ursi.	Bearberry.
		Alpina.	Alpine Bearberry.
	Epigæa.	E. Repens.	Trailing Arbutus.
	Gaultheria.	G. Procumbens.	Creeping Wintergreen.
	Ilex.	I. Opaca.	
	Vaccinium.	V. Stamineum.	Deerberry.
	Ledum.	L. Latifolium.	Labrador Tea.
	Pyrola.	P. Rotundifolia.	Round-leaved Pyrola—Wintergreen.
		Uniflora.	One-flowered "
	Chimaphila.	C. Umbellata.	Prince's Pine.
		Maculata.	Spotted Wintergreen.
	Monotropa.	M. Uniflora.	Indian Pipe.
Aquifoliaceae, (*Holly Family.*)	Ilex.	I. Opaca.	American Holly.
		Canadensis.	Canadian "
	Prinos.	P. Verticillatus.	Black Alder.
		Lævigatus.	Smooth Winterberry.
		Glaber.	Inkberry.
Ebenaceae, (*Ebony Family.*)	Diospyros.	D. Virginiana.	Persimmon.
Plumbagineae, (*Lead Wort Family.*)	Statice.	S. Limonium.	Marsh Rosemary.
Orobanchaceae, (*Broom-Rape Family.*)	Epiphegus.	E. Virginiana.	Beech Drops—Cancer Root.
	Orobanche.	O. Americana.	Squaw Root.
Scr'phul'riaceae (*Fig Wort Family.*)	Chelone.	C. Glabra.	Snake Head.
Labiatae, (*Mint Family.*)	Mentha.	M. Canadensis.	Wild Mint.
	Lycopus.	L. Virginicus.	Bugle Weed.
	Cunila.	C. Mariana.	Common Ditany.
	Hyssopus.*	H. Officinalis.	Hyssop.
	Pycnanthemum.	P. Aristatum.	Mountain Mint.
		Incanum.	Wild Basil.
	Monarda.	M. Didyma.	Oswego Tea.
		Fistulosa.	Wild Bergamot.
		Punctata.	Horse Mint.
	Hedeoma.	H. Pulegioides.	Penny Royal.

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* Exotic.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Labiatae, (*Mint Family.*)	Collinsonia.	C. Canadensis.	Rich Weed.
	Salvia.	S. Lyrata.	Lyre-leaved Sage.
		Verticifolia.	Nettle-leaved "
	Scutellaria.	Lateriflora.	Mad Dog Scullcap.
		Nervosa.	Scullcap.
Gentianaceae, (*Gentian Family.*)	Sabbatia.	S. Angularis.	American Centaury.
	Frasera.	F. Caroliniensis.	" Columbo.
	Gentiana.	G. Quinqueflora.	Five-flowered Gentian.
		Crinita.	Fringed "
		Detonsa.	Smaller Fringed "
		Alba.	Whitish "
		Saponaria.	Soapwort "
	Menyanthes.	M. Trifoliata.	Buck Bean.
Apocynaceae, (*Dog Bane Family.*)	Apocynum.	A. Androsæmifolium.	Spreading Dog-Bane.
		Cannabinum.	Indian Hemp.
Aristol'chiaceae (*Birth Wort Family.*)	Asarum.	A. Canadense.	Wild Ginger.
	Aristolochia.	Serpentaria.	Virginia Snake Root.
	Polygonum.	P. Hydropiper.	Smart Weed.
Lauraceae, (*Laurel Family.*)	Sass'fras, (Laurus.)	S. Officinale.	Sassafras.
	Benzoin.	B. Odoriferum.	Spice Bark.
		Melissæfolium	
Juglandaceae, (*Walnut Family.*)	Carya.	C. Alba.	Shag-Bark Hickory.
		Glabra.	Pig-Nut "
		Amara.	Swamp "
Cupuliferae, (*Oak Family.*)	Quercus.	Q. Alba.	White Oak.
		Tinctoria.	Black "
Myricaceae, (*Sweet Gale Family.*)	Myrica.	M. Gale.	Sweet Gale.
		Cerifera.	Bayberry.
	Comptonia.	C. Asplenifolia.	Sweet Fern.
Betulaceae, (*Birch Family.*)	Alnus.	A. Serrulata.	Smooth Alder.
		Incana.	Speckled "
Salicaceae, (*Willow Family.*)	Salix.*	S. Candida.	Hoary Willow.
		Tristis.	Dwarf Gray Willow.
		Humilis.	Low-bush "
		Discolor.	Glaucous "
		Sericea.	Silky-leaved "
		Cordata.	Heart-leaved "
		Angustata, &c.	Narrow-leaved "
	Populus.	P. Tremuloides.	American Aspen.
		Balsamifera.	Balsam Poplar.
Coniferae, (*Pine Family.*)	Pinus.	P. Resinosa.	Red Pine.
		Mitis.	Yellow Pine.
		Rigida.	Pitch Pine.
		Strobus.	White Pine, &c.
	Abies.	A. Balsamea.	Balsam Fir.
		Canadensis.	Hemlock Spruce.

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* We have twenty-two distinct species of Willow, all possessing tonic properties.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Coniferae, (*Pine Family.*)		A. Nigra.	Black Spruce.
		Alba.	White "
	Juniperus.	J. Communis.	Common Juniper.
		Virginiana.	Red Cedar.
Araliaceae, (*Arum Family.*)	Acorus.	A. Calamus.	Sweet Flag.
Orchidaceae, (*Orchis Family.*)	Orchis.	O. Spectabile.	Showy Orchis.
	Cypripedium.	C. Pubescens.	Yellow Ladies' Slipper.
		Spectabile.	Showy " "
Amaryllidaceae (*Amaryllis Family.*)	Aletris.	A. Farinosa.	Star Grass.
		Aurea.	
Smilaceae, (*Smilax Family.*)	Smilax.	S. Sarsaparilla.	
		Rotundifolia.	Green Briar.
Trilliaceae.	Trillium.	T. Cernuum.	Wake Robin.
		Erectum.	Birth Root.

◆

Balsam of Copaiba.

COPAIFERA OFFICINALIS.

(*And Other Species.*)

THE various and extended uses of Copaiba, medicinally, render it a very important article with the medical profession—so much so, that I have considered a few words not amiss relative to its falsification and tests, as well as a consideration of the processes pursued for presenting it in convenient and desirable forms for administration.

Copaiba of commerce presents a considerable variety of appearances, as may be naturally expected from the great variety of its botanical sources; and it is not within the limits of this article to enter into a full description of each. It is often found in the shops, badly adulterated, to the extent of hardly containing ten per cent of Copaiba. Balsam of Copaiba, according to Pareira, is a clear, transparent liquid, having, for the most part, the consistence of olive oil. By age it becomes considerably denser, from the loss of volatile oil. It is insoluble in water; completely soluble in alcohol, ether, and the fixed and volatile oils; is solidified by about one-sixteenth of its weight of fresh calcined magnesia, and by alkalies it yields a kind of soap insoluble in water.

Considerable variation consists in the color, odor, taste, consistence, and specific gravity, as well as in the relative quantities of volatile oil and resin yielded by different varieties of Balsam of Copaiba, depending upon the different species from which it is produced. Some varieties contain as high as eighty per cent of volatile oil, while others yield only thirty per cent, according to the circumstances of its collection, such as age, position, and season of collection.

As this is an article extensively used, it has necessarily become an object to substitute for it coarser or inferior articles, and likewise to adulterate it largely with foreign substances, as fixed oils, castor oil, oil of turpentine, poppy-seed oil, &c.; but, inasmuch as the article derived from many sources will vary in consistence, chemical character and composition, it is necessary that one should, before pronouncing the article adulterated, apply the most approved tests.

Various are the plans that have been proposed for ascertaining its purity. All appear to agree that when pure it is transparent, free of turpentine odor when heated, soluble in two parts of alcohol, and dissolves one-fourth of its weight of carbonate of magnesia with the aid of gentle heat, and continues translucent; otherwise, with alcohol, a turbid mixture results, from which the impurity slowly separates, and a small proportion of any fixed oil renders the product with carbonate of magnesia opaque.

Castor oil is one of the most common adulterations, which may be easily detected by mixing three parts of the Balsam with one part of sulphuric acid, and shaking with fifteen or twenty parts of alcohol of 36°. If the mixture separates, it indicates that the Balsam is adulterated with castor oil. This test will not detect less than one-ninth part of adulteration.

One part of potassa dissolved in two parts of water forms a clear solution with nine parts of pure Copaiba, and the liquid continues clear when moderately diluted with water or alcohol; but the presence of one-sixth part of fixed oil in the Copaiba occasions more or less opacity in the liquid, and half the quantity causes the precipitation of white flakes in a few hours.

Boiled with fifty times its weight of water, till the liquid is evaporated, if the Copaiba contains any fixed oil, the residue will be more or less soft, according to the quantity present, otherwise it will be hard and brittle.

A drop of the Balsam placed on a piece of unsized paper, and heated until all the essential oil is expelled, forms a semi-transparent, well-defined spot; but if the Balsam has been adulterated with a fatty oil, it is surrounded by an oily areola.

Two and a half parts of Balsam shaken with one part of liquor of ammonia, sp. gr. 0.965, forms a mixture which becomes clear and transparent in a few moments, and may be heated at 212° Fah. without becoming opaque, if pure.

By agitating the suspected sample with a lye of caustic soda, and setting the mixture aside to repose, the Balsam, after a time, rises to the surface, and the fatty oil present, if any, forms a soapy, thick mass below.

Pure Copaiba may be adulterated with fifty per cent of a fat oil (castor nut or almond), without ceasing to give a clear solution with two parts of alcohol, but it combines badly with magnesia and ammonia. Excess of alcohol, however, separates the oil in all cases. The best test for detecting the fat oils is the use of pure alcohol to which some caustic potash has been added. Mr. Redwood is of the opinion that most of the proposed tests of the purity of Copaiba are liable to fallacy, and that the best measure of its activity is the quantity of volatile oil it affords by distillation. However true this may be, I have had no reason to abandon tests which exhibited the character of the adulteration, and with proper care, a little experience and observation, I think them as reliable as the average of tests for adulterations in other articles.

M. Guibourt, after many experiments with a great variety of specimens, came to the following conclusions:—

"1. A Copaiba which possesses the four properties:—*First*, of being entirely soluble in two parts of absolute alcohol; *second*, to form at the temperature of 60° Fah. a transparent mixture, with two-fifths of its weight of a strong solution of ammonia; *third*, to solidify with one-sixteenth of its weight of calcined magnesia; *fourth*, to produce a dry and brittle resin after prolonged ebullition, is a Balsam which is certainly pure; and those which present these four properties are to be preferred to all others.

"2. The last character is an indispensable complement to the three first, which alone are not sufficient to certify the purity of the Balsam. On the other hand, one or two of the first characters may be wanting, without necessarily involving the adulteration of the Balsam. When these characters are wanting, we must try to discover the presence of some foreign substance;

but unless we can prove its presence, we must not conclude that the Balsam has been adulterated—it may arise from some unknown properties in the variety of the tree from which it is produced.

"3. The characters drawn from the action of ammonia, and of calcined and carbonate of magnesia, and which have been regarded as the most certain means of detecting the adulteration of Copaiba by a fixed oil, are far from possessing that value which has been assigned to them. The soft state of the Resin of Copaiba, deprived of its volatile oil by boiling water, is a much more certain test of this falsification."

Copaiba is not always mixed or adulterated with a single article; sometimes two or more are added, and not unfrequently factitious or compounded articles are made up really containing not a trace of Copaiba.

The following are some of the numerous formulæ in use for adulteration:—

Balsam of Copaiba,	4 pounds.
Castor Oil,	3 "

Mix well.

Balsam of Copaiba,	7 pounds.
Castor Oil,	4 "
Yellow Rosin,	2 "

Balsam of Copaiba,	One part.
Canada Balsam,	" "

Balsam of Copaiba,	One part.
Canada Balsam,	" "
Castor Oil or Nut Oil,	" "

Balsam of Copaiba,	7 pounds.
Nut Oil,	3 "
Yellow Rosin,	2 "
Canada Balsam,	1 "

FACTITIOUS COPAIBA.

Castor Oil,	7 quarts.
Copaiba Bottoms,	1 "

Mix warm, and filter through flannel.

Castor Oil,	1 gallon.
Yellow Rosin,	3 pounds.
Canada Balsam,	2 "
Oil of Juniper,	2 ounces.
Oil of Savine,	1 ounce.
Essence of Orange and Lemon, each	½ "
Powdered Benzoin,	1 "

Melt the Rosin with the Castor Oil and Benzoin, and when nearly cold add the essences.

Canada Balsam,	3 pounds.
Venice Turpentine,	1 "
Oils of Fennel, Juniper and Savine,	q. s.

Used chiefly to fill cheap capsules.

Copaiba has long been regarded as a specific in gonorrhœa, but the experience of practitioners is decidedly favorable to its value in other diseases of the mucous membrane. In medicinal doses Copaiba is stimulant, cathartic and diuretic. Therapeutically it possesses the property of diminishing excessive mucous discharges, and at one time was used with apparent success as a febrifuge in ague. This use seems to have been abandoned, and the principal purpose for which it is now employed is the treatment of mucous inflammations, as bronchitis and gonorrhœa. Its use in the latter extends from the commencement of the last century, and is still the most approved remedy in that disease.

There appear to be two methods of treatment by it—one not to exhibit it until the inflammatory symptoms have subsided, the other to give it at the very outset, to cut short or suppress the disease. Both systems have their advocates, and very clearly their propriety should be determined by the characteristics of the case presented.

The greater influence of Copaiba over the urethral than over other mucous membranes is explained by experiments, which sufficiently prove that the active principle of the Balsam is chiefly eliminated by the kidneys, and exerts a healing influence on the inflamed mucous membrane of the urethra, by coming directly in contact with it, dissolved in the urine, as this fluid is expelled from the bladder. Dr. Roquette relates some interesting experiments and cases, which strongly prove its local action. His observations and conclusions are confirmed by Marchal, Dallas, and others, that the injection of Balsam of Copaiba is the most efficacious mode of treating gonorrhœa. Mr. Dallas employed it in sixteen cases, using no internal remedy either in recent or old gonorrhœa, with complete success: using for the enema five drachms of Copaiba, yolk of one egg, one grain of gummy extract of opium, and seven ounces of water—used several times a day.

The experience of most practitioners sustains the statement of Ricord, and others, that Copaiba is less successful in the gonorrhœa of females than males, inasmuch as the disease is not confined to the mucous lining of the urethra, (on which the influence of Copaiba dissolved in the urine is principally exertised,) but extends to that of the vagina. This adds (if further proof were needed) additional evidence of its therapeutical influence locally, and suggests the local treatment by injection of such cases, as well as by the internal administration of the article.

In chronic inflammation of the bladder, and in catarrh of the same organ, it has been highly recommended by Dr. La Roche, of Philadelphia. In leucorrhea it has been employed with advantage, and its employment in *chronic pulmonary catarrh* has been favorably spoken of by Drs. La Roche, Armstrong, and others; and Pareira refers favorably to its use in chronic inflammation of the mucous membrane of the bowels, especially of the colon and rectum, and that Dr. Cullen spoke favorably of its use in hemorrhoids, and says:—" Having learned from an empirical practitioner that it gives relief in hemorrhoidal affections, I have frequently employed it with success." Dr, Ruschenberger recommends it locally in chilblains.

The nauseous taste and unpleasant effects of Copaiba, employed in the natural state, has suggested various methods of preparation, as solidification by magnesia, saponification by soda, and by enveloping it in capsules.

COPAIBA SOLIDIFIED is directed to be made by incorporating one drachm of calcined magnesia with two ounces of Copaiba, or one-sixteenth of its weight. To obtain a solid mass the Copaiba must be thick and resinoid, and the magnesia recently calcined. The introduction of wax in considerable quantity, to give it the consistence required, should not be allowed. In this form it is made into dragees, or oblong, oval pills, which are coated with sugar, and form one of the most convenient and eligible forms of administration.

COPAIBA SAPONIFIED is produced by a combination of soda and potash with the oleo-resin of pure Copaiba. Thus solidified or saponified it is digestible and readily assimiliable, and is said to produce no nausea, vomiting, or gastric suffering, which occasionally occur with Copaiba in the natural state.

COPAIBA AND RHATANY.—In some instances, and particularly in cases of gonorrhœa and gleet, it is indispensable to associate with it powerful auxiliaries, as cubebs or rhatany. By its tonic and astringent qualities the rhatany moderates its stimulant action on the intestines, and renders it less purgative; contributes powerfully to the cure of chronic affections, by fortifying the mucous membrane of the urethra, the atony of which is often the cause of persistent gleets. Ricord recommends the combination as much superior to Copaiba alone in the treatment of blenorrhagia.

COPAIBA AND CITRATE OF IRON.—Especially adapted to complaints of females, whose peculiar affections require more particularly the use of ferruginous tonics.

COPAIBA AND CUBEBS.—Cubebs, when taken in large or frequent doses, generally diminishes the discharge, and remarkably relieves the other symptoms in a short time, but when employed alone the disorder returns after some time, especially if it be relinquished or the dose diminished. Cubebs should, therefore, be conjoined with Copaiba.

COPAIBA, CUBEBS AND RHATANY.—This combination is much esteemed, and recommended by some. The addition of rhatany renders the action of Copaiba less purgative, insures its more complete absorption into the system, and tends to allay hemorrhage from any part of the system.

COPAIBA, CUBEBS AND CITRATE OF IRON.—The combination with iron makes a valuable preparation for an endemic condition of the system, and consequently of great debility. It is valuable in chlorosis, leucorrhea, &c., like all preparations of iron; gives force to broken down powers, and produces a favorable state of the blood: so much desired in the treatment of these diseases.

All these combinations are valuable, for their convenience and accuracy of preparation, as well as for the perfect manner in which they are enveloped in a coating of sugar.

I shall, at another time, refer more particularly to the therapeutical properties of Copaiba, and prepare an article on Cubebs, as this article is a powerful auxiliary to it, and one of the most useful remedies we possess in the same class of diseases, as well as in many others to which its use has not been sufficiently directed.

Remarks on Concentrated Preparations, Simple Tests, and Easy Method of Analysis.

JALAPIN.

JALAPIN is obtained from the root of *Ipomea Jalapa*, and is composed of two resins. Its color is gray. Is insoluble in water and the acids, except concentrated sulphuric; is soluble in alcohol, and is precipitated from its alcoholic solution by water. Of the two resins of which it is composed one only is soluble in ether. Its powder is exceedingly irritating to the nostrils and throat. It purges actively in three-grain doses, and possesses all the properties of the root.

It is often adulterated with guaiacum, resin and other substances, besides the substitution for pure resin of the alcoholic, hydro-alcoholic and aqueous extracts.

Properties of the Alcoholic Extract.—Color much darker than Jalapin; entirely soluble in alcohol and alkalies, and partially so in water. One hundred parts gave:—

Soluble in alcohol,	40.25
Soluble in water,	59.75
Total,	100.00

Properties of the Hydro-Alcoholic Extract.—Color darker than that of the alcoholic extract; partially soluble in alcohol, water and alkalies; soluble in proof spirit; attracts moisture from the air rapidly. One hundred parts gave:—

Soluble in alcohol,	29.61
Soluble in water,	70.39
Total,	100.00

Properties of the Aqueous Extract.—Color very dark; soluble in water and alkalies. The alcohol dissolves only a small portion which is not precipitated by water, showing the absence of any resin. Insoluble in ether; attracts moisture from the air.

CIMICIFUGIN.

Cimicifugin, or Macrotin, is obtained from the root of the *Cimicifuga Racemosa*, or Black Cohosh, and is a true resinoid. Notwithstanding it has been asserted by some that Cimicifugin should represent an alkaloid, resin and neutral, all such preparation which I have examined are only hydro-alcoholic extracts, or are identitical with the hydro-alcoholic extracts which I have prepared from the root, and submitted to the same analysis.

Properties of Cimicifugin.—Color light brown, with faint narcotic odor, slightly bitter and nauseous taste; insoluble in water and ether; soluble in alcohol, and alkalies, precipitated by acids from the alkaline solutions.

Properties of the Alcoholic Extract.—Color darker than Cimicifugin; soluble in alcohol and alkalies, and partially so in water. One hundred parts gave:—

Soluble in alcohol,	50.20
Soluble in water,	49.80
Total,	100.00

Properties of the Hydro-Alcoholic Extract.—Color much darker than the preceding; partially soluble in alcohol; soluble in diluted alcohol and in alkalies; absorbs moisture from the atmosphere rapidly, and cannot be reduced to a powder without the admixture of a foreign substance, as sugar of milk. One hundred parts gave:—

Soluble in alcohol,	35.24
Soluble in water,	64.76
Total,	100.00

Aqueous Extract.—Color very dark brown; soluble in water and alkalies; sparingly soluble in alcohol; water precipitates no resin from the portion soluble in alcohol; insoluble in ether; absorbs moisture rapidly, and requires an admixture of a foreign substance to reduce it to a powder.

CAULOPHYLLIN.

Caulophyllin is obtained from the root of *Caulophyllin Thalictroides*, or Blue Cohosh. The color is similar to Cimicifugin, with a greenish tint; odor strong and somewhat unpleasant; soluble in alkalies and alcohol, and insoluble in ether and acids.

The properties of the alcoholic, hydro-alcoholic and aqueous extracts are similar to those of Cimicifugin.

SANGUINARIN.

Sanguinarin is obtained from the root of *Sanguinarin Canadense*, or Blood-Root, and is a resinoid. The presence of four principles, as a resin, resinoid, alkaloid and neutral, are claimed by some writers; and with a view to ascertaining the accuracy of these views, we have examined several specimens. In some we found a resin and an alkaloid; but in the one claiming to present four distinct principles, in combination, we found the same characteristics as in the hydro-alcoholic extract.

Properties of Pure Sanguinarin.—Color deep redish brown; peculiar strong odor; bitter, nauseous taste, with rather a persistent sense of pungency in the fauces; insoluble in water; soluble in alcohol; partially soluble in alkalies, ether and acetic acid. When mixed with the alkaloid Sanguinarina, if treated with water slightly acidulated, the alkaloid will be dissolved.

Properties of the Alcoholic Extract.—Color very deep red; soluble in alcohol; partially soluble in water, alkalies, &c.; cannot be reduced to a powder without the admixture of a foreign substance. One hundred parts gave:—

Sanguinarin and Sanguinarina,	68.05
Soluble in water,	31.05
Total,	100.00

Properties of the Hydro-Alcoholic Extract.—Color dark; soluble in diluted alcohol; sparingly soluble in alcohol, and liberally so in water. One hundred parts gave:—

Sanguinarin and Sanguinarina,	48.50
Soluble in water,	51.50
Total,	100.00

Properties of the Aqueous Extract.—Color light brown; entirely soluble in water; sparingly so in alcohol.

SANGUINARINA.

Sanguinarina is prepared from the root of the same species. Pure Sanguinarina is a white or pearl gray (if not discolorized by animal charcoal) body, having a bitter, somewhat acrimonious taste. Soluble in alcohol and ether; sparingly so in water; possesses well-marked alkaline characters; soluble in acids, and forming red colored salts with them; by exposure to the air it assumes a yellowish tint.

HYDRASTINA.

Hydrastina is obtained from *Hydrastis Canadensis*, or Golden Seal. When pure it is in the form of a bright yellow powder, like chromate of lead, or in the form of crystals. It is entirely soluble in alcohol, water and alkaline solutions; is insoluble in ether, and possesses a very bitter taste. Its beautiful yellow color is of itself sufficient to distinguish it easily from the various extracts of Golden Seal.

Properties of the Alcoholic Extract.—Color of a brownish yellow, resembling the root in powder; soluble in alcohol; partially soluble in water, which dissolves the Hydrastina, leaving the oleo-resin. One hundred parts gave:—

Hydrastina,	30.25
Resin, &c.,	69.75
Total,	100.00

Properties of the Hydro-Alcoholic Extract.—Color and properties are the same as the alcoholic extract, and contains about the same per cent of Hydrastina, but less resin.

Properties of the Aqueous Extract.—Color is brighter than the preceding, and contains about the same per centage of Hydrastina, without any resin, but mixed with gum, starch and extractive matters.

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The Cinchona Alkaloids and Their Salts.

QUINIA.

(From Parish's Practical Pharmacy.)

This alkaloid is prepared from various species of cinchona bark, which contain it in combination with kinic acid and the astringent principle called cincho-tannic acid. These combinations being only partially soluble in water, resort is had to an acid which liberates the alkaloid in a soluble form. That used in our officinal process for preparing the sulphate of quinia is muriatic, which is mixed with water in which the powdered bark is boiled. The very soluble muriate of quinia contained in this decoction is decomposed, giving up its acid to the lime, while the quinia is liberated, and, being insoluble, is precipitated with the excess of lime added, the water retaining the chloride of calcium resulting from the reaction, and most of the impurities, in solution. The precipitated quinia and excess of lime being now digested in alcohol, the former is dissolved, and the impure quinia is obtained by evaporating this alcoholic solution. The remaining part of the process consists in converting this into the officinal sulphate, at the same time rendering it pure. To accomplish this, the amorphous mass is dissolved in diluted sulphuric acid, and filtered through bone-black, which contains sufficient carbonate of lime to neutralize the excess of sulphuric acid, and thus facilitate the crystallization of the sulphate as the solution cools. This process requires to be repeated, with the addition of acid, if the charcoal is too alkaline, till a white and pure product is the result.

The desire has been often expressed for a method to prepare this alkaloid without alcohol: the following is the process of Herring, who substitutes in place of it oil of turpentine or benzole:—

Powdered bark is boiled with caustic soda, to remove extractive, gum and coloring matter, exhausted with dilute sulphuric acid, evaporated at abou 120°, filtered, precipitated by caustic soda, washed, re-dissolved in SO_3, recrystallized, treated with animal charcoal, and by fractional crystallizations purified from the other alkaloids.

The soda liquor is supersaturated with muriatic acid, evaporated, filtered, treated with hydrate of lime, from which precipitate the alkaloids may be extracted by oil of turpentine or benzole. On adding dilute SO_3, a solution of the alkaloid is obtained to be puried as above.

Quinia occurs in silky needles, or in a crystalline powder, fusible at 194° to an electrical mass, soluble in about 400 parts of water, sixty parts ether, two parts alcohol or chloroform, twenty-four parts of olive oil, also in alkalies, carbonate of ammonia, chloride of calcium, &c. Its solution in concentrated nitric acid turns yellow by heat; the solution in sulphuric acid is colored only at a high temperature.

Its salts are mostly crystallizable; their solution show a blue fluorescence, which is rendered green on the addition of chlorine water, and subsequently ammonia—too much chlorine causes a brown color. A solution of quinia in diluted sulphuric acid, mixed with some acetic acid and alcohol, and heated to 130°, yields, after the addition of tincture of iodine, beautiful emerald green crystals of iodosulphate of quinia, which are nearly colorless by transmitted light. The solution of its salts is precipitated by alkalies, their carbonates and bicarbonates; but if they had been previously sufficiently acidulated with tartaric acid, bicarbonate of soda produces no precipitate. If their solution is treated first with chlorine water, free from hydrochloric acid, and subsequently with finely-powdered ferrocyanide of potassium, a red coloration is produced. Quinia salts are precipitated by ferrocyanide of potassium, the precipitate is dissolved on boiling and by an excess of the precipitant. (Differences from cinchonia.)

Quiniæ Sulphas, (U. S.)—Of the salts, the neutral sulphate (formerly called disulphate) is mostly employed. Its mode of preparation has been given above. It is in feathery white crystals, much interlaced; of its eight equivalents of water; six are given off by exposure to dry air, while the remaining two are driven off at 248°. It dissolves in 740 parts of cold and thirty parts hot water, in sixty parts of alcohol, but scarcely in ether. The addition of a mineral or of certain organic acids renders it easily soluble.

The salts of quinia are all used as tonics; the sulphate, especially, is a well-known antiperiodic and febrifuge. The dose varies from one to twenty grains. It is given in powder, pill, mixture, and solution. (See *Extem. Pharmacy.*)

The following unofficial salts are occasionally prescribed:—*

Quiniæ Murias.—The Dublin Pharmacopœia orders 437 grains of crystallized sulphate of quinia (equivalent to 382 grains of the salt dried at 212°) dissolved in thirty ounces of boiling water, to be precipitated by 123 grains of chloride of barium, and the filtrate evaporated until a pellicle forms. It crystallizes with 3HO in needles of a pearly lustre, more soluble than the sulphate. Baryta is detected by sulphuric acid, sulphate of quinia by chloride of barium.

Quiniæ Hydriodas.—Five parts of effloresced sulphate of quinia dissolved in alcohol, and decomposed by an alcoholic solution of three parts of iodide of potassium, precipitates sulphate of potassa, and yields, on cooling and evaporating, hydriodate of quinia in fine crystalline needles.

Quiniæ Antimonias is precipitated by double decomposition of antimoniate of potassa and sulphate of quinia, and crystallized from hot water or alcohol It has been administered in periodical diseases in doses of from six to ten grains during apyrexia, and it is stated to be rarely necessary to give it a second time.

Quiniæ Arsenis.—Quinia is precipitated from 100 parts of its sulphate, dissolved in 600 parts alcohol, and boiled with fourteen parts arsenious acid; the filtrate, on cooling, separates needles of this poisonous salt. It may be given with caution in doses from one-quarter to one-half a grain several times a day.

Quiniæ Lactas is obtained by saturating lactic acid with quinia, or by double decomposition of the baryta salt of the former with the sulphate of the latter, and crystallizes in soluble needles.

Quiniæ Tartras is crystallized in needles from the hot solution of quinia in tartaric acid.

Quiniæ Citras is separated in needles from the hot mixture of citrate of soda added to sulphate of quinia until an acid reaction is shown to test paper.

Quiniæ et Ferri Citras.—Dr. Squibb saturates 330 grains of citric acid with freshly-precipitated sesquioxide of iron in a warm place; to this is added in the cold the quinia from seventy-eight grains of effloresced sulphate, and, after solution, dried by spontaneous evaporation (*Am. Jour. Ph.*, xxvii. 294.) It is stated to crystallize in greenish scales by saturating a hot solution of citrate of the sesquioxide of iron with quinia. As usually met with, it differs little in appearance from the garnet-colored scales of citrate of iron, and varies very much in composition. The usual dose is from two to five grains, in pill.

Quiniæ Acetas.—Seventeen parts of the effloresced sulphate of quinia is dissolved in boiling water and mixed with six parts of crystallized acetate of soda; acetate of quinia crystallizes in white feathery needles, nearly insoluble in cold water. (See remarks in *Am. Jour. Ph.*, xxx. 385.)

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* See Phosphorous Compounds for Quiniæ Phosphas and Quiniæ Hypophosphas.

Quiniæ Valerianas is officinal in the Dublin *Pharmacopœia*, which prepares it by double decomposition between muriate of quinia and valerianate of soda. It is also obtained by dissolving freshly-precipitated quinia in diluted valerianic acid, heating to near the boiling point, and crystallizing by cooling; the mother liquors are evaporated below 125°. It combines the tonic properties of quinia with the antispasmodic effects of the valerianates.

Quiniæ Tannas.—Tannic acid precipitates tannate of quinia from all solutions which have not been too much acidulated; it has little taste on account of its solubility in neutral liquids.

Quiniæ Gallas is obtained by double decomposition between a hot solution of sulphate of quinia and gallate of potassa. It is in crystalline granules, or a white powder, almost insoluble in water, soluble in alcohol and dilute acids.

Quiniæ Kinas.—To obtain this neutral salt directly from the bark, the following process is given by Henry and Plisson:—The extract is dissolved in three parts of water, nearly neutralized by carbonate of lime, then cautiously neutralized by hydrated oxide of lead; from the filtrate the lead is removed by sulphuretted hydrogen, after which the evaporated liquid is treated with alcohol of 0.842, the alcohol distilled off and the residue repeatedly treated with water and alcohol until nothing is separated by these liquids. It is obtained in white crystalline warts, soluble in four parts of water and eight parts of alcohol.

Quiniæ Hydroferrocyanas.—One part sulphate of quinia, one and a half parts ferrocyanuret of potassium, and seven parts of boiling water yield the salt on cooling, which is to be recrystallized from alcohol. It appears in greenish-yellow needles, which are insoluble in water. Pelouze asserts it to be quinia mixed with some Prussian blue. Dollfuss found it to be $C_{40}H_{24}N_2O_4+2(FeCy+2HCy)+6HO$.

[TO BE CONTINUED.]

Rational Treatment of Disease.

The following propositions form the conclusion of a long paper read by M. Piorry before the French Imperial Academy of Medicine, in May and June last:—

1. The treatment of disease is founded, almost entirely, on our knowledge of anatomy and physiology, aided by physical and chemical facts, and matured by clinical observation.

2. Positive therapeutics can only be established upon such knowledge as shall enable us to appreciate the causes, the development, and the effects of lesions which have been previously verified by a rigorously exact diagnosis.

3. Rationalism, which ever since Descartes, has been the method followed by genuine observers, must be the foundation of medicine, as it is of the other

natural sciences.

4. Before seeking new remedies for a disease we must learn to define exactly the existing organic and physiologic condition of the system, and carefully study the effects of known medicaments and hygienic agents upon this condition.

5. By far the greater part of the progress of therapeutics is due to medical rationalism guided by exactness of diagnosis.

6. Specific medicines—that is, those which are applied to an unknown cause of disease, and which are only discovered by accident—are very few, and ought only to be adopted in practice when they are indicated by rationalism and the most positive diagnosis.

7. Some physicians err in censuring rational medicine (from which results a system of therapeutics characterized by good sense), in order to extol the treatment by specifics, which has no other foundation than accident, and is only supported by the fancy and credulity of an ignorant public, who are the enemies of science, and who are easily seduced by the marvels of mysticism, and by deceitful promises.—*Boston Med. and Surg. Journal.*

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Therapeutic Properties of Belladonna.

By M. Dubois.

[We reproduce with pleasure the following conclusions, at which the author arrives in a prize essay on this subject, for we believe that the remedy which he extols is underrated by the profession in this country. Trousseau, in the best book on therapeutics that has ever been written, places belladonna in the same rank with calomel, opium and iodine, and the opinion of such a man alone should induce physicians to make a faithful trial of the remedy. We feel confident that those who do so will not be disappointed in the result.]—*Virginia Med. and Surg. Journal.*

1. That belladonna is not without efficacy in some phlegmasiæ, especially in those of the globe of the eye;

2. That it is the best remedy known in the photophobia which so frequently accompanies inflammations of the eye;

3. That its power as a prophylactic in scarlatina can hardly be contested;

4. That it sometimes cures certain hemorrhages, such as hæmoptysis, hæmatamemis and metrorrhagia;

5. That it is the remedy *par excellence* for neuralgia, for whooping cough, and most of the neuroses;

6. That it is the remedy *par excellence* to combat pain, especially when external;

7. That it alleviates more than any other remedy the pains of cancer, and cures sometimes, if not cancer, diseases closely resembling it;

8. That it can be advantageously employed in spasmodic contraction and occlusion of the pupil; to reduce procidentia of the iris and to break up adhe-

sions; to prevent the inflammation of the iris so frequent after this operation; to maintain dilation of the pupil, and to diminish the chances of adhesions after the operation of couching; to prevent secondary cataract; to reëstablish vision temporary at least, when the lens is opaque in the centre, or when there are opacities of the cornea; to assist the diagnosis in some diseases of the eye;

9. That it is of real efficacy in some cases of strangulated hernia;

10. That its property of facilitating labor in spasmodic constriction of the uterine neck is powerful and incontestible.

11. That it produces advantageous results in some cases of fissure of the anus;

12. That its employment may be more or less useful in spasmodic contraction of the bowels, in constipation, in spasmodic constriction of the rectum, of the anus, and of the vulva; in phimosis and paraphimosis, spasmodic stricture of the urethra, retention of urine, strangury, spasmodic stricture of the larynx and escophagus; in blepharospasm, incontinence of urine, nephretic colic, hemorrhoids, &c.

13. Finally, that belladonna should be placed in the first rank of medicinal substances.—*Bulletin of the Medical Society of Gand*—(*Gazette Médicale.*)

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Glycerine Ointment for the Itch.

M. Bourguignon, so well known in Paris by his successful researches on "the acarus scabiei," has published in the *Gazette Médicale* the following formula. One general friction, not preceded by soap ablutions, is sufficient:—Yelks of two eggs; essence of lavender, lemon, and mint, of each 120 drops; gum tragacanth, half a drachm; well-pounded sulphur, twenty-six drachms; glycerine, thirty-two drachms. Total weight, nearly eleven ounces. Mix the essence with the yelk of egg, add the gum tragacanth, make a good mucilage, and then add very gradually the glycerine and sulphur. Many cures have been obtained by this preparation, which has the advantage of giving no pain. The well-known Helmeric ointment being really useful, M. Bourguignon has modified it, and substituted glycerine for the axunge. In the altered form the preparation is not any dearer, as efficacious, and less painful than the original ointment. It does not grease the clothes, and has an agreeable perfume:—Gum tragacanth, fifteen grains; carbonate of potash, thirteen drachms; well-pounded sulphur, twenty-six drachms; glycerine, fifty-two drachms; essences of lavender, lemon, mint, cloves, and cinnamon, of each fifteen drops. Total weight, eleven eleven. Make a mucilage with the gum and one ounce of glycerine, add the carbonate, mix until it is dissolved, and then gradually add the sulphur and glycerine; lastly, pour in the essences. With this compound, M. Bourguignon advises two general frictions of half an hour, within twelve hours of each other, and followed, twenty-four hours afterwards, by a simple warm bath, as the glycerine is soluble in water. Two-thirds of the preparation should be used for the first friction, the other third for the second.—*London Pharm. Journal, from Lancet.*

Belladonna in Preventing the Secretion of Milk, and in Mammary Abscess.

(Read before the Aurora City Medical Association, at Aurora, Ill., Oct. 3, 1859.)

By A. Hard, M. D.

There has been much said of late of the virtues of belladonna in preventing and arresting the secretion of milk; and having, with others, labored under the inconvenience of possessing no reliable remedy to fulfill such indications, I resolved to test its virtues, and I propose to give the result of its use in six cases, in which I have endeavored to give it a fair trial.

In the first three it was desirable to prevent the secretion of milk in one breast (from the entire want of development of the nipple) without interfering with the other. All three patients had previously suffered from mammary abscesses, and they looked forward to their approaching *accouchement* with "fear and trembling." Immediately after delivery, I ordered the following:—

℞.—Extract of belladonna,............................ ℈ij.
Aqua font.,........ .... ℥ij.
Misce.

With this solution bathe the *one* breast every four hours, until the flow of milk is established in the other; then apply less frequently, but continue its use a week longer.

In one patient there was no milk secreted in the breast thus treated, while the other breast afforded the usual amount and appeared unaffected. In the other two cases there was a little milk secreted, but not sufficient to distend the gland so as to produce inconvenience, while the opposite breasts, like that of the first case, performed their functions unimpaired. The fourth was a case of premature delivery at the sixth month, as the result of placenta prævia. The solution of belladonna was applied to both breasts. But little milk was secreted, which was soon absorbed.

The fifth was a case of abortion. The belladonna was not applied until the breasts became distended and painful. I ordered that the milk be drawn with a breast pump once, then applied the belladonna, and had no further trouble.

In the last case a large abscess had formed in one breast, which was discharging, and extensive swelling and inflammation existed in the other, at the time I was called. The patient had been a great sufferer for four weeks, both from the "cold water treatment" and the mammary inflammation. I applied the belladonna, as in the other cases, also warm fomentations, had the bowels moved by sulphate of magnesia, and ordered the following:—

℞.—Sulph. quinine,............................15 grains.
Pulv. opii,................................ 2 "
Misce.

Div. in chart. No. 4. Dose, one every three hours.

Under this treatment suppuration was prevented, the inflammation was subdued, and convalescence soon followed. There was but little constitutional effect of belladonna perceptible. In two cases the pupils of the eyes were a little dilated: the children were not effected by it. However, I took the precaution to guard against its inhalation either by the mother or child.

If belladonna proves as useful in the hands of others as it has in mine, in these unpleasant complications consequent upon child-bearing, a vast amount of pain and suffering will be mitigated, if not entireiy prevented. I would call the attention of the Association particularly to its application to one breast, leaving the other undisturbed.—*Chicago Medical Journal, November*, 1859.

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A New Disinfectant for Dressing Putrid Sores and Ulcers.

Considerable discussion has recently taken place in the French Academy, respecting a new preparation, introduced by MM. Demeaux and Corne, for dressing and disinfecting putrid sores and ulcers. It consists of a mixture of one hundred parts of commercial plaster of Paris in a very fine powder, and from one to three parts of coal tar. This mixture forms a powder of a more or less grayish color, and a slightly bituminous odor. For application, it may also be made into a paste with olive oil, which binds the powder together without destroying its absorptive power. The following are the properties of this substance, as described by the above gentlemen:—A gangrenous sore, with an abundant fetid suppuration, treated with this dressing, is immediately freed from all disagreeable odor, and the bandages, even after twenty-four or thirty-six hours, exhale no more odor than if taken from a simple fracture. An ulcerated cancer, producing a fetid, serous suppuration, dressed with this substance, is entirely deprived of odor as long as the dressing remains on. So also the linen saturated with pus, cataplasms impregnated with the suppuration, &c., placed in contact with this substance lose all their disagreeable odor; the infectious liquid produced by gangrene, clots of decomposed blood, tissues in a state of advanced putrefaction, treated with this substance are immediately disinfected. Its action appears to be to arrest the work of decomposition; it removes the insects, and prevents the production of maggots. The consistence acquired, either by the powder alone or the paste with oil, does not cause the least pain to the patient or harm to the sore. Its application may be indirect or direct; the latter produces no harm, but rather exercises a detersive action favorable to cicatrization. This dressing has the double power of disinfecting the pus and other morbid products, and of absorbing them; the last circumstance is of the greatest importance, because it enables the use of lint to be dispensed with. Fifty kilogrammes of this powder may be made in Paris for one franc. M. Velpeau, at the Hôpital de la Charité, and several other French surgeons, have employed this preparation with great success, and speak very highly of its disinfecting properties. Mr. Crace Calvert, of Manchester, has addressed a letter to the French Academy, in reference to this subject, pointing out the great variation which exists in the composition of coal tar, and the consequent necessity for more accurately ascertaining to which of the constituents the disinfecting properties are really due, in order to insure the uniform action of the preparation. From the results of his own experiments he considers that the antiseptic properties of the tar are entirely due to the carbolic acid present. He states that a corpse injected with a weak solution of this acid was preserved from decomposition for several weeks, and that a piece of flesh steeped in carbolic acid was exposed to the air for three years without change. He also states that a small quantity added to urine will preserve it from decomposition for some weeks, and that it is also capable of preventing the gallic fermentation from taking place in the solutions of tanning substances.—*London Pharm. Journal, and Philadelphia Journal of Pharmacy.*

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Warren's Hæmostatic.

A correspondent requests us to publish the formula for Warren's hæmostatic, or *styptic balsam*, as it is very improperly called. This preparation has been highly recommended in hæmoptysis, hæmatenesis, epistaxis, and menorrhagia.

It is said to act by its sedative power in diminishing the force of the circulation, and by its astringent qualities in contact with the bleeding vessels.

The formula, and its mode of preparation, is as follows:—

℞.—Acid. sulph. (by weight), ... ʒ v.
Ol. terebinth, ...
Sp. vini rect. *aa.*, ... f. ℥ ij.

Place the acid in a wedgewood mortar, and the turpentine slowly, stirring it constantly with the pestle; then add the alcohol in the same manner, and continue stirring it until no more fumes arise, when it may be bottled, and should be stopped with a ground stopper.

It should be prepared from the purest materials, and when done it should exhibit a dark but clear red color like dark blood; but if it be a pale, dirty red, it will be unfit for use. The dose is forty drops, and the method of using it is as follows:—

Put a teaspoonful of brown sugar in a common sized tea-cup, and rub in forty drops of the preparation until it is thoroughly incorporated, and then slowly stir in water until the cup is nearly full, when it should be immediately swallowed. This dose may be repeated at intervals of an hour, until three or four doses are taken, if necessary, and its use should be discontinued when fresh blood ceases to flow.

After standing a few days a pellicle forms upon the surface, which should be broken, and the liquid below it used. It does not deteriorate by age, if tightly stopped.—*Philadelphia Medical and Surgical Reporter, December* 10, 1859.

Selections.

THE EMPIRICAL TREATMENT OF PHTHISIS.—The *Lancet* says:—"Dr. Watson remarks, with great propriety, in his excellent lectures, that the more intractable the disease the greater the number of remedies proposed. No one is surprised at the various modes of treating tuberculosis, which have been extolled, for it is quite natural that new weapons should be sought against an enemy who proves invulnerable by the old ones. But we protest against unnecessarily teazing and tormenting the unfortunate individuals whose lungs are being destroyed by tuberculous deposits, and whose organism is wasting under the effects of the local mischief and morbid diathesis. M. Beau, physician to the Paris Charité Hospital, for instance, proposes, and has practiced the following method:—'Give carbonate of lead in phthisis, because painters hardly ever suffer from the disease; and substitute one cachexia for the other.' Then we have a paper addressed by M. Aussandon to the Academy of Medicine of Paris, 'on the treatment of pulmonary consumption.' The author, who has noticed that bakers, and generally those who sleep in the day and watch at night, bear the symptoms of the latter stages of phthisis better than others, straightway advises to keep consumptive patients awake at night and send them to bed in the day time!"—*Philadelphia Med. and Surg. Reporter.*

SCARLATINA AND MEASLES.—Mr. Witt has just published a letter to Mr. Simon on the use of ammonia in scarlatina and measles. Mr. Witt looks upon the treatment by ammonia in these diseases as a specific, as much so as quinine in intermittents. The late Mr. Wilkinson stated that Dr. Peart had introduced the remedy, and did not lose one patient out of three hundred cases of scarlatina; and Mr. Wilkinson adds that for seventeen years he has never lost a patient from this disease, nor ever had a case that even appeared dangerous. Mr. Ricardo, who attended many large schools, had not lost a single patient, out of some hundreds, during twelve or fourteen years. The dose is from three to seven grains ever hour for the first twenty-four hours, and every second hour for the next day. All acid drinks are carefully avoided. This is a matter of interest just now that the power of ammonia in retarding coagulation of the blood has been established, and it is curious as an illustration of the success attending opposite methods of treatment; for the use of acetic acid in the treatment of scarlatina has been gaining ground very rapidly of late, and the success which has followed its use has been very great.—*Medical Times and Gazette.*

EPILEPSY TREATED BY THE HYDROCYANATE OF IRON.—M. Fabre reports seven cases of confirmed and well-marked epilepsy, in which pills of this substance have operated cures. He alludes also to numerous cases in which it has been successfully employed by M. Roux, of Brignolles, and adduces the testimony of Dr. Dilasiauve, physician to the Bicêtre, and others, in support of the advantageous effects of this preparation. The hydrocyanate of iron has been successfully employed in chorea and other neuroses complicated with chlorosis since 1829. It seems to exert a powerful influence over the uterine functions, and has succeeded in menstrual disorders after other ferruginous preparations had failed. We must refer those who desire further information on this subject to the article of M. Fabre.—*Rèvue de Malgaigne*, (March, 1853, p. 139.)

TANNATE OF QUINIA IN NOCTURNAL SWEATS.—M. Delioux, chief of the French naval surgeons, after numerous experiments with the different preparations of bark in the treatment of colliquative sweats, which occur during sleep in phthisis and other diseases, considers the tannate of quinia, introduced by Barreswil, the most appropriate remedy in this affection. This agent is supposed to be peculiarly applicable to two essential conditions in this symptom: organic debility and periodicity. M. Delioux cites many cases in support of his views. He administers this agent in two or three doses of six or eight grains during the afternoon. It is insipid, and causes neither wakefulness nor indigestion.—*L' Union Médicale*, No. 43.

CHROMIC ACID IN SYPHILITIC VEGETATIONS.—Mr. Hairon, after describing the advantages derivable from the chromic acid in certain forms of the granular eyelid, (a disease of common occurrence in the Belgian army,) observes that the trials he has made of the acid, as recommended by Marshall and Heller in syphilitic vegetation, have been attended with the most complete and rapid success. Moreover, its application, whether to these syphilitic vegetations or to the fungus granulations of the conjunctiva, is never attended with pain or reaction, notwithstanding the rapid destruction of tissue that takes place.—*Annailes and Occulistique.*

TANNIN.—Introduction of tannin within the uterus is accomplished by means of crayons formed of tannin or gum tragacanth, one-sixth of an inch in diameter and an inch long. They are passed, by means of forceps and speculum, through the os uteri into the cavity of the uterus, in which they are kept by means of charpie, moistened with a concentrated solution of tannin. The crayon slowly softens and dissolves, when it is replaced by another. M. Becquerel recommends this treatment in hemorrhage and diseases of the mucous lining of the womb.—*Philadelphia Med. and Surg. Reporter.*

POISONING BY OPIUM OR BELLADONNA.—Opium and belladonna are mutually remedial, when either has entered the circulation in a poisonous dose. From this cause, if both be prescribed together, as with a view to lull cerebral excitement, the effect desired will not be produced, whilst if the other be given separately it will. In cases of poisoning by opium, give a solution of belladonna—say a drachm of the tincture every half hour, or, if it cannot be swallowed, inject it subcutaneously. Conversely, in a case of poisoning by belladonna, opium may be used. Several cases are recorded illustrating this subject.—*Braithwaite's Retrospect.*

IODATE OF POTASH.—The action of this salt is more powerful than that of the chlorate of the same base, and has, in our hands, yielded excellent results where the chlorate of potash had failed.—*Ibid.*

IODIDE OF CALCIUM.—This salt is very valuable in cases in which the iodide of potassium is inadmissible. It does not occasion idiosm, or resorption of the healthy tissues; it does not excite the circulation, nor irritate the stomach and bladder, by passing off too rapidly by the kidneys. Its solution in milk is perfectly tasteless. It is particularly useful in squamous diseases of the skin, and chronic and metallic poisoning by mercury, lead and copper.—*Braithwaithe's Retrospect.*

HÆMOPTYSIS.—Recently, after a trial of many other agents, without avail, and the tincture of gelseminum alone giving only momentary relief, I found a mixture of it with tincture of veratrum viride, in doses of twenty-five drops of the gelseminum with twelve drops of veratrum viride, answered completely. I have also found the extract of rhatany, combined with gelseminum or veratrum viride, of value.—*Dr. Miller.*

ERYSIPELAS.—In some severe cases of erysipelas I gave of the tincture of veratrum viride six drops every three hours, and each morning a small dose of podophyllin. In some cases where the brain was affected I gave six grains of sulphate of quinia at a dose, once in eight hours, in conjunction with the veratrum.—*Ibid.*

PERTUSSIS—OXIDE OF ZINC.—In the latter stages of whooping cough I find the oxide of zinc, in connection with the sulphate of quinia, quite valuable. Small doses seem to act better than larger ones. Tannic acid is also frequently indicated.—*Ibid.*

CHALYBEATES.—Iron should never be given in the enormous doses advised by some. One, or at most two, grains at a dose, and repeated two or three times a day—and from four to eight days, with an intermission of a few days, and then its use recommenced, will do far better than its continuous use. Boerhave said:—"Give chalybeates in the most simple form, and we will have all we desire."—*Ibid.*

CHLOROFORM AS A NARCOTIC.—When opium is contra-indicated, or fails to act, in cases where it is desired to procure sleep, give thirty or forty minims of chloroform suspended in a little acacia mixture, or some other mucilaginous liquid. It generally succeeds in procuring for the patient two or three hours of tranquil sleep.—*Braithwaite's Retrospect.*

CHLORATE OF SODA.—Chlorate of soda is considerably more soluble than the corresponding potash salt; it may consequently be given in a much smaller quantity of vehicle, and moreover the taste is less disagreeable. It has been employed with uniform success in several cases of diphtheria.—*Ibid.*

DIGITALINE IN SPERMATORRHŒA.—Dr. Lucien Corvisart, a pupil of M. Chomel, reports three cases of obstinate nocturnal, and even diurnal, seminal losses, which were completely cured by the use of digitaline. We refer those who desire to learn the details of the treatment to Dr. Corvisart's paper.—*Bulletin de Thérapeutique.*

Pharmacy.

PROCESS FOR PREPARING IODIDE OF SODIUM.

By M. Cripekoven.

℞.—Iodine,	12	parts.
Iron, in powder,	3	"
Distilled water,	32	"

After the iodide of iron is made by the ordinary process, pour into the liquid, unfiltered—

Iodine,	6	parts.
Caustic soda at 37°,	12	"

Mix by shaking well together, then add

Caustic soda,	9	"

If the liquid contain an excess of iron, separate it by carbonate of soda. Try the solution with litmus paper, and if it manifest an alkaline reaction, allow it to stand and settle; then filter and evaporate to dryness; dissolve in equal parts of distilled water, filter and evaporate.

ELECTUARY FOR INCONTINENCE OF URINE OF CHILDREN—CHLOROSIS AND LEUCORRHEA.

By M. Crineaud.

℞.—Cannella, in powder,	375	grains.
Iron, in powder,	1000	"
Ergot,	140	"
Sugar, Honey,	*aa.* 1000	"

Mix well. Take one grain of it morning and evening.—*Réportoire de Pharmacie.*

SYRUP OF COFFEE FOR WHOOPING COUGH.

By M. Delairaye.

℞.—Coffee, in powder,	500	grains.
Boiling water,	q. s.	

Obtain by displacement 1000 grains of the liquid.

Alcoholic extract of belladonna,	10	grains.
" " ipecac.,	10	"
Sugar,	2000	"

Melt in a water bath, and filter. Dose, for children three to five years old, fifteen grains morning and noon, and double the quantity at evening, in two or three tea-spoons of hot water. For children of less age, half the quantity.—*Journal des Com. Med.*

TREATMENT OF SCARLATINOUS ANGINE BY IODINE.

℞.—Iodide of potassium,	1	grain.
Iodine,	0.1	"
Chlorate of potassa,	4	grains.
Nitrate of "	6	"
Aqueous solution of potash,	4	"
Water,	240	"

Administer one or two teaspoonsful every four hours, according to age of the patient.—*Gazette Médicale de Lyon.*

RED DROPS.

By M. Leconte.

℞.—Camomilla,	60	grains.
Opium,	8	"
Saffron,	2	"
Cannella,	1	"
Cloves,	1	"
Alcohol,	300	"

Macerate for eight days; express and filter. Dose, from five to 20 drops, several times a day, on sugar, in gastrology, diarrhœa, &c.—*Réportoire de Pharmacie.*

ALUMINOUS PASTILES.

By Dr. Argenti.

℞.—Alum, gum, and sugar,	*aa.* Equal parts.
Water of laurel,	q. s.

Make into pastiles weighing four grains, and which contain from half to one grain of alum. Much used in ulcerations of the mouth.—*Bulletin Générale de Thérapeutique.*

METHOD OF DETERMINING EASILY AND EXACTLY THE QUANTITY OF IODINE IN ANY TINCTURE.

This method consists in the direct transformation of iodine in a given weight of tincture into iodide of zinc by a known weight of pure zinc, in excess, and determining afterwards by a simple calculation based on chemical equivalents; after having weighed the undissolved zinc, the quantity of iodine corresponding to the weight of zinc dissolved, and formed into iodide of zinc.—*Journal de Chimie Médicale.*

FORMULA FOR NEURALGIA.

Dr. Charles McLean, of Baltimore, recommends the following formula for that painful disease, neuralgia of the head and face:—

℞.—Extract of belladonna,	4	grains.
Aq. ammonia,	6	fluid ounces.
Spirit terebinth,	½	" "
Tincture opii,	2	" "
Oil of olive,	½	" "

Mix. Apply during the paroxysms.

OINTMENT FOR ACUTE INFLAMMATION OF THE TYMPANUM.

Dr. Kramer, whose excellent work on the special diseases of the ear is well known, extols the employment of the following ointment when inflammation of the tympanic membrane has not yielded to the action of antiphlogistics:—

Tartar emetic,	4	grms.	
Simple cerate,	8	"	
Oil,	8	"	M.

This ointment is used by friction over the mastoid process. This measure is intended to prevent the organic alterations which ordinarily take place at this period of the disease.

In case the affection has passed into the chronic state, and gives rise to a slight otorrhœa, mucous or purulent, M. Kramer recommends aiding the action of the antimoniated ointment by the employment of simple injection, and then with the solutions thus made:—

Water,	30 grms.
Sulphate of zinc or acetate of lead,	5 to 50 ctgrms.
Or nitrate of silver, or bichlor. of mercury,	1 to 5 "

When the membrane of the tympanum is perforated, he does not employ these injections except after blunting the sensibility of the mucous membrane of the tympanic cavity, by a tepid solution composed of—

Sulphate of potassa,	5 to 15 ctgrms.
Water,	30 grms.

The physician ought always to perform these little operations himself, with the end of suspending them if too great irritation supervenes.—*Bulletin de Thérapeutique, and Druggist.*

TREATMENT OF DYSPEPSIA.

Messrs. Editors:—In the course of a long practice in cases of indigestion, I have found the following prescription to have done good service:—

℞.—Prepared carbonate of iron, calcium of magnesia, pulverized elm bark, each	℥ i.
Pulverized cubebs,	℥ ss.
M.	

Take a teaspoonful, half an hour before eating, in half a teacupful of water.—*Boston Med. and Surg. Journal.*

SYRUP OF PHOSPHATE OF IRON AND MANGANESE.

In the absence of any authorized formula for this syrup, and in answer to several correspondents, we insert the following:—

℞.—Phosphate of iron,	72 grains.
Phosphate of manganese,	48 "
Glacial phosphoric acid,	ʒ vi.
Sugar,	℥ x.
Water, sufficient to make f.	℥ xij.

Dissolve the phosphoric acid in a small quantity of the water, add the phosphates, and apply heat till dissolved, then add the sugar and the remainder of the water, so that the product may measure twelve fluid ounces.—*Pharmaceutical Journal.*

BROWN MIXTURE.

By Charles S. Tilyard.

Brown mixture, if prepared in the following manner, may prove more satistory than after the old method:—

℞.—Pulverized extract of liquorice,		℥ j.
Gum arabic, in lump,		℥ j.
Paregoric,	fl.	℥ iv.
Ant. wine,	fl.	℥ j.
Wine of ipecac,	fl.	℥ j.
Sweet spirit of nitre,	fl.	℥ j.
Cold water,	q.	s.

Mix the paregoric, antimony wine, spirits nitre and wine of ipecac together, in a bottle holding one quart; turn in the pulverized extract of liquorice; set aside for twelve hours, with frequent agitation, then pour in gradually twenty fluid ounces of cold water; set aside again for twelve or twenty-four hours, frequently shaking. Filter through a *well-plaited* filter, allow the gum to dissolve in the liquid, and when dissolved pour it into a bottle containing one and a half pounds (avordupois) of white sugar in *coarse* powder; shake frequently until the sugar is dissolved, or hasten it by setting the bottle in warm water. The whole, when finished, should measure two pints.

The proportions, it will be observed, are the same as in the Mistura Glycyrrhizæ Composita of the U. S. D., with the exception of the sugar, also in substituting one ounce of wine of ipecac for one ounce of wine of antimony.

The result is a thin, transparent, dark syrup, retainining, it is believed, the virtue of its components.—*Jour. and Trans. of the Maryland College of Pharmacy.*

Editorial.

With this number commences the new year; we present our readers with its usual compliments, and with the hope this year may be to all a year of reciprocal relations. Having received from our readers and patrons very many flattering testimonials of appreciation and good will, we enter upon the new year with renewed hope of permament success: the very numerous early renewals of subscription by our old subscribers are the most substantial assurances we could possibly have that our efforts to make the JOURNAL worthy of their support have not been in vain.

Our readers already understand the plan and character of the JOURNAL; but to such as have not read it, and who design to do so, we will say, that it is devoted exclusively to the subject of materia medica—giving to the profession desirable and valuable information of new facts and developments in the powers, properties and application of the various therapeutic agents now in use, and to the selection and concentration of what really tends to the advancement of science or may be found useful in the daily routine of practice.

We shall devote, largely, its pages to a consideration of those native plants which possess properties deserving the attention of medical practitioners; and with the botanical history of each will be given, in detail, the results of the chemical examination we shall have made of *its constituent parts*, together with its medical properties and uses, and facts relative to its operation on the human system, as are known from the observation or evidence of those qualified to form correct opinions upon the subject.

In connection with a general consideration of our indigenous materia medica, we are instituting an elaborate series of experiments concerning the *cultivation of narcotic plants;* the analysis of the foreign plant, of the cultivated plant; analysis of soils, plants grown upon particular soils, and by treatment with special manures—all of which will be given from time to time in detail, together with all circumstances connected with their growth and the formation of their peculiar principles.

We hope by these means to aid the investigation of many plants, and diffuse a knowledge concerning them which may prove highly useful, and to present to the profession a mass of information which the general body of medical practitioners cannot possibly obtain in any other way.

A FRENCH SPECIFIC FOR ASTHMA.—We see it announced that Dr. Courty, a professor of the Medical School of Montpelier, has discovered a cure for asthma. The remedy consists alone in the injection of the sulphate of atropine under the skin of the neck over the course of the pneumogastric nerve. The substance injected is an alkaloid made from the atropia belladonna, or deadly night-shade. Its narcotic and poisonous qualities are well known. In medical doses it acts powerfully in allaying pain and controling irritability of the nervous system. The difficulty was, in asthma, to bring the substance into contact with the great nerve, or pair of nerves, which supply the principal part of nervous filaments to the lungs. "Dr. Courty, it appears, did not hesitate to thrust a trocar and canula into the region of the nerve, and directly over it, and there to inject a few drops of the medicine, and leave it. The incision was made inside the sterno-cleido-mastoid muscle on a level with the thyroid cartilage, and directly over the sheath of the great vessel of the neck. The trocar was pushed in at first a distance of seven or eight millimetres only, from fear of wounding the important organs of this region. The quantity of liquid injected was six drops, containing about two milligrammes of the sulphate of atropine. This first injection relieved the patient, but not entirely, and was attended with the usual symptoms of large doses of belladonna. A second injection was made, four days afterwards, on the other side of the neck, and this time the trocar was inserted as deep again as on the first occasion. The trocar was then withdrawn, and the point of the canula 'promenaded' a little up and down in the cellular tissue, in order to diffuse the medicine over as large a surface of the covering of the great vessel as possible. The cure was rapid and permament from that day."—*Exchange.*

Veratrum Viride.—The Illinois State Medical Society has issued a circular to the physicians of that State, with the following inquiries:—

"1. Have you made use of *veratrum viride* in your practice? If you have:
"2. In what form do you use it, (if the tincture, whose preparation?) and in what dose?
"3. What are its effects?
"4. In your opinion, what is its *modus operandi*?
"5. What value do you attach to it as a remedial agent?
"6. In what diseases have you found it most useful?"

Replies to be addressed A. Hard, M. D., Aurora, Kane county, Ill., early in March.

It would be well if other State Medical Societies would do the same thing. There appears only one difficulty: physicians do not answer these circulars promptly. Being much engaged in business, they defer doing so to a more convenient time, and finally forget it altogether. If they would give prompt attention to such matters, it would give local and State Societies much valuable information, and of great general benefit.

Dr. S. W. Butler, senior editor of the *Medical and Surgical Reporter*, Philadelphia, has been appointed chief resident physician at the Philadelphia Lunatic Asylum.

Chicago College of Pharmacy.—A College of Pharmacy has been organized in the city of Chicago. Prof. Blaney has the chair of chemistry, and F. Scammon that of pharmacy.

Correction.—Credit was omitted, unintentionally, in our last issue to the *American Medical Monthly* for the article on Strychnia, as well as to Dr. Gibbs, from whose monthly summary it was selected.

Correspondents will oblige by writing plainly their names, town, county and State. We have, in several instances, been unable to answer letters because these are omitted.

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On Vegetable Tonics.

BY CHARLES A. LEE, M. D.

NUMBER II.

We have seen that there are, at least, forty-six natural orders of plants indigenous to North America, including one hundred and eight genera, and two hundred and two species, endowed to a greater or less extent with tonic properties. It would not be difficult to extend this list, but the plants which it would embrace have as yet been so imperfectly investigated, that no great practical benefit would accrue from such extension. There can be no doubt, however, that some of them will, ere long, be found to occupy an important rank in this class of remedies. The various plants belonging to this class might be arranged under six divisions, viz: *astringent tonics*, *pure or simple bitters*, *demulcent tonics*, *alterative tonics*, *antiperiodic tonics*, and *aromatic tonics*.

The astringent tonics have already been considered to some extent. We have stated that there is a large number of vegetable substances possessing astringency, but with little or no bitterness, such as oak bark, uva ursi, geranium, marsh rosemary, blackberry root, &c., and that all these might properly be ranked among tonics, inasmuch as they produce the same constitutional effects. Every practitioner must have observed that when given in small doses, and at suitable intervals, they improve the appetite, aid digestion, and strengthen the general system. Their physiological effects are analogous, if not identical, with those of the bitter tonics, and they fulfill the same indications. Formerly they were extensively employed in paroxysmal affections as antiperiodics, as well as in cases of debility; though they proved of greater benefit when the latter was attended with exhausting discharges. We have a class of vegetable tonics which combine both bitterness and astringency in an eminent degree, and they occupy, perhaps, the first rank in this class of remedies. To this division belong the different species of salix and cornus, the liriodendron, the pinckneya, &c. Some of our tonic plants combine mucilaginous and demulcent properties with a bitter principle. Some, also, contain considerable quantities of starch, which imparts nutritive properties, while they are entirely destitute of astringency. A still larger number combine with a bitter principle more or less volatile oil, which imparts an aromatic flavor, and allies them more closely with diffusible stimulants, such as the serpentaria, the asarum canadense, the orange and lemon peel, and many of the *Labiatæ* class of plants.

The PURE BITTERS constitute a distinct class, including all those vegetables which possess bitterness without aromatic or astringent properties. What is called the *bitter principle* is not a principle *per se*, but an alkaloid, resinoid or neutral substance.*

The *tonic properties* of vegetables were formerly supposed to reside in what was called *extractive matter*. At present, however, chemistry recognizes no such substance. What goes under this name is merely the product of the evaporation of the infusions or tinctures of plants, after their known principles have been separated. Thus, if the soluble ingredients of a plant have been dissolved out by water, we have a variety of proximate principles, most of which have a strong affinity for oxygen, by which, when evaporation is carried on in the open air, they are converted into complex substances, scarcely soluble in water, and if heat be applied these reactions occur to a still greater extent. The fluid becomes turbid and brown, and the extract obtained from it is only a mixture of the different organic constituents in great part decomposed. This brown substance is called *apotheme.* The solid extracts, formerly in use, were nothing more than these insoluble and inert compounds. Kane considers as *extractive* that substance, whatever it may be, which is contained in the fluid before the real constituents of the plants are all converted into apotheme, and which dissolves equally in water and dilute alcohol, but not in absolute alcohol or ether. Such a product will be more or less colored, uncrystallizable, and will precipitate metallic salts. It may possibly retain some of the flavor of the original plant, but it will have lost most of its medicinal properties.

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* To obtain this principle, the bark or root in question may be coarsely powdered and placed in a displacement apparatus, and treated with proof spirit; then add a solution of acetate of lead to the liquid, filter, and free from excess of lead by sulphuretted hydrogen; filter again, evaporate to two-thirds, add a small quantity of animal charcoal, and filter. The solution is then to be evaporated at the lowest possible temperature, and, if practicable, *in vacuo*. The evaporation may be checked as soon as a pellicle forms on the surface, or the fluid becomes syrupy. On cooling, crystals, if the active principle is crystallizable, will form, which, if colored, may be decolorized by animal charcoal and recrystallization. Or it may, perhaps, be obtained by concentrating a watery decoction of the plant; agitating when cold, occasionally, with lime for twenty-four hours; evaporating the filtered liquor to dryness, acting on the residuum with boiling rectified spirit, when impure crystals may be obtained by concentration and cooling, which may be purified in the manner above mentioned. A little ether should be added to the alcohol employed.

Pharmaceutical writers have been in the habit of attributing different kinds of extractive matter to different classes of plants, as *bitter extractive* to the bitter tonics, *astringent extractive* to astringents, *gummy extractive* to plants yielding gum, pectin or albumen. All these so-called extracts, however, are, for the most part, but the complex products of the decomposition of other bodies. As extracts are now prepared in our establishments by steam, *in vacuo*, and at a low temperature, neither *extractive* nor *apotheme* is produced; but we obtain the constituents of the plant in a concentrated form, without having undergone any chemical changes by the operation. Some of the bitter tonics owe their bitterness as well as activity either to a crystalline neutral principle, as salicine, cetrarin, columbin, hydrastin, liriodendrin, quassin, &c.;* or to an extractive matter, soluble in water, but not crystallizable, as the bitter extractive of coptis, chimaphila, cornus, eupatorium, serpentaria, marrubium, &c. Impure crystals of gentisic acid may be obtained from the bitter extractive of gentian, but the active and bitter principle, not yet isolated, does not reside in them. Some of the tonic vegetables also contain alkaloids, to which they owe their medicinal virtues and bitter taste, as the cinchona, the strychnos, ignatia, beeberine bark, &c.; while tannic acid is the tonic constituent in the pure astringent vegetables, as the geum, geranium, spirea, uva ursi, rubus, statice, &c. If the statement of Kane be admitted, then *salicine* is frequently the tonic principle in plants, inasmuch as it is found in the leaves and bark of a great variety of trees, though particularly abundant in those species of salix which have a bitter taste. This statement needs further confirmation. It is a well known fact that most vegetable tonics possess a bitter quality to a greater or less extent; and some writers on therapeutics have attempted to show that this quality is essential to tonics. There are, however, some exceptions to this law, as we have seen in the case of many astringents, which though tonic are not bitter; while the converse is evidently untenable, opium, digitalis, and many other drugs, though bitter, having no tonic qualities. However this may be, it is very certain that bitter extractive, or the bitter principle, whatever it may be, subserves a most important purpose, not only as a medicine, but also as a stimulus to healthy digestion in herbivorous animals generally, as stated by Paris, who says that it passes through the alimentary canal without undergoing any diminution in quantity or change in its nature. This writer calls attention to the fact that cattle will not thrive upon grasses which do not contain a portion of this principle, and that sheep fed exclusively on yellow turnips, which contain little or no bitterness, are very certain to become sickly, and perish. There can be no doubt that the bitter principle in the Irish and Iceland moss renders these substances much better adapted for purposes of nutrition, counteracting, as it does, a purely mucilaginous diet; while it is admitted that animals fed on marshy grounds, on grass containing little nourishment, are best defended from the diseases they are liable to contract in such situations, by the ingestion of bitter plants, as the trefoil, gentian, &c. Prof. Chapman used to state, in his lectures, that the bitter principle was as essential to the digestion of vegetable as salt is to animal matter, serving as the most congenial stimulus to the stomach when engaged in this process. Much might be said of its prophylactic virtues in preventing the generation of worms.

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* The following method is, perhaps, the best for purifying resinoid and neutral bitter principles:—Pulverize the substance, and place the powder in a glass tube; pour as much cold absolute alcohol over it as to moisten it well; after a few hours pour off the alcohol, which will be found highly colored. This removes a large portion of the fatty and coloring matters mixed with it. The powder is then to be treated with boiling alcohol, a little animal charcoal added, then filtered, and allowed to evaporate spontaneously. If not perfectly colorless, it may be treated with cold alcohol, and subsequently dissolved in boiling water, filtered, and again evaporated in a similar manner. Some of these principles, owing to their slight solubility in water, do not impart a bitter taste when first taken into the mouth.

Admitting, then, as we must, that there are several tonic bitter principles, let us next inquire into their physiological and therapeutical effects upon the human body. The vegetable bitters exert a powerful effect upon the digestive organs, and by nervous sympathy, as well as absorption upon the rest of the system. They stimulate the mucous and muscular coats of the stomach, and thus check any tendency to acetous fermentation; promote tardy digestion, increase the nutritive powers of those vegetables with which they are combined, and in certain debilitated conditions of the organs prove powerfully remedial. There is no evidence that the pure bitters exert much influence over the circulatory or the nervous system, but by modifying the vital properties of the mucous and muscular tissues of the digestive canal they contribute to the production of a more healthy blood: the natural stimulus of all the organs and functions. That the effect is especially propagated to the collatitious viscera, the liver and pancreas, is very manifest; nor is it less evident that the active principles are taken into the circulation, and act on the nutritive function throughout the entire system. In excessive doses simple bitters will disturb the stomach, causing nausea and vomiting, or purging; but even here they do not much disturb the action of the heart or cerebro-spinal system. Their chief therapeutic uses, then, are to invigorate digestion, promoting the function of both primary and secondary assimilation, and well suited to all cases of gastric and enteric debility unattended with inflammation, congestion, or any structural and organic changes. Under such circumstances they promote the secretion of a more healthy gastric juice, and thus by favoring the solution of the food relieve the flatulence, gastric uneasiness, acid eructations, headache, &c., consequent on a debilitated state of the stomach and a morbid condition of its secretions. And this effect is propagated throughout the entire alimentary canal.

Another useful application of the simple bitter tonics is in the management of convalescence. As a general rule, pure air and a suitable diet will suffice for a gradual restoration of the strength after an attack of acute disease, as fever or inflammation. But cases not unfrequently occur where the digestive organs need the stimulus of some of the bitter tonics, either alone or associated with such medicines as promote the secretions and excretions. It should be borne in mind that debility, which is chiefly manifested in the associated organs of digestion, can never be permanently removed unless the secretions and excretions be duly promoted. To secure this end, the simple bitter tonics should be combined with aperients. But this combination will be hazardous as long as there is irritation, or congestion, or active determination to any of the abdominal viscera. In cases, moreover, to which they are adapted, much discrimination is needed in regard to a choice of the particular tonic best suited to the case. It is a very common opinion that all the pure bitters resemble each other so closely that it matters very little which is selected. But this is an error. In some, colombo, in others gentian, and in still others quassia, will best fulfill the existing indication; so that, although analogous in chemical composition, they widely vary in their medicinal operation and therapeutical effects. It may be difficult or impossible to specify the peculiarities of each individual in the group, but experience fully sustains the opinion that their remedial effects often widely differ under similar circumstances. It is not unusual, for example, to find one of the group exciting nausea, proving unacceptable to the stomach, and, of course, inefficacious; while another, with similar sensible properties, allays all gastric uneasiness, excites the appetite, and facilitates the cure. There are some cases where debility of the digestive mucous surface is complicated with irritation, and yet some of the bitter infusions may be exhibited with benefit, such as gold thread, gentian, American colombo, or the menyanthes, and especially if combined with acids or small quantities of potash or soda. Vomiting is often speedily allayed by such a combination. If there is a lax state of the bowels, associated with asthenia of the digestive organs, not dependent on inflammatory irritation of the mucous surface, the bitter infusions, combined with the alkaline carbonates, are often of great service. There may be cases in which the bitter tonics would seem to be indicated, and yet there exists great torpor of the liver, or accumulations of bile in the gall bladder and hepatic ducts; here cholagogues should always precede the use of the tonic. But in regard to the organs of secretion and excretion, we are to remember that tonics have a tendency to strengthen them and augment their energy; and when their products are too abundant, from relaxation and debility, the secretory function will probably be restored to its normal state by the tonic influence thus exerted; while if the secretions are diminished in consequence of a torpor of the organs, they may be restored by a similar tonic operation—so that this class of remedies have a regulating effect, proving, under certain circumstances, diuretics, diaphoretics, emmenagogues, expectorants, &c. They, however, will accomplish the end sooner, and with more certainty, if preceded by some medicine acting specifically on the organ whose functions are suspended. This controling and regulating influence of tonics is well illustrated in the colliquative sweats of phthisis, which are greatly lessened by a few drops of aromatic sulphuric acid, or a few grains of quinine, given at bed time. They also lessen the frequency of the pulse, while they increase its force by lessening the irritability of the heart and increasing the tonicity of its muscular fibres. The power of the bitter tonics in allaying morbid irritability and sensibility consequent on great exhaustion, is constantly seen in the latter stages of most diseases. Inflammation does not necessarily contra-indicate their use, any more than it does the use of stimulants and supporting agents generally, as animal broths, &c. It will depend on the kind of inflammation, its seat and stage, and particularly the constitution, previous habits, and present state of the vital forces of the patient. If there is a loss of appetite and digestive power, independent of local disease of the stomach, and consequent on the general languishing state of the powers of life, then some of the bitter tonics will be found greatly serviceable. The increased tonicity which they impart to the whole digestive system often seems essential to recovery. The morbid irritability dependent on protracted disease, and consequent prostration, will be relieved by measures calculated to restore the general strength, and among these the bitter tonics are among the most valuable. Their use is often dispensed with from a fear, often ungrounded, that they may disagree, and aggravate the existing symptoms. But an observant and cautious practitioner will always guard against such result, by giving them at first in small doses, or combining them with alkalies, laxatives, or some mild aromatic, or suspending their use entirely, if they are found, on trial, to disagree. If the circulation is languid from general debility, in which the heart will participate, or if the pulse is preternaturally frequent from existing irritability, the bitter tonics will be found to exert a regulating power, as in the case of disordered secretion, and the pulse will gradually be brought to the healthy standard. Nor does inflammation of some of the more important organs of the body necessarily forbid their use. Even in pneumonia, especially the typhoid variety, or where it occurs in persons of broken constitution, or accustomed to the daily use of alcoholic stimulants, this class of remedies may often be used with much advantage. Who has not witnessed the good effects of quinine, or the hop, under such circumstances? In this affection, which seems to have, as a general rule, a prescribed limit, the strength must be sustained, and the vital forces invigorated, in order that nature may be able to accomplish the cure. Forcible coughing, which is necessary for successful expectoration, requires considerable bodily vigor, without which the patient must succumb from the overloaded condition of the bronchial tubes. A certain amount of aliment must be taken and assimilated, in order to cause the maintenance of sufficient strength to disgorge the lungs of the mucous secretions constantly accumulating. To this end, the tone of the stomach must be sufficiently maintained for the digestion of a necessary amount of nutriment. The same principles also are to guide us in the management of chronic diarrhœa, dysentery, and all affections attended with exhausting discharges. As time is an essential element in the cure, and all depends on the recuperative energies being properly sustained, our chief attention is to be directed to the sustentation of the nutritive function and the supply of suitable nourishment—not that specific means, also, are not to be employed, but only in subservience to and in alliance with the former.

These remarks, which might be much extended, must suffice on this branch of our subject.

Preparations.—Our standard formulary, the United States Pharmacopœia, recommends the bitter tonics under the forms of infusion, decoction, solid extracts, fluid extracts, tinctures, powders, and syrups.

Infusions.—It is well known that the bitter principles of vegetables are taken up by water, hot or cold, by alcohol, proof spirit, wine, or sulphuric ether. Water, proof spirit and wine are the usual menstrua. As a general rule, the best method of extracting and preserving these principles is by percolation with cold water. Hot water readily dissolves the amylaceous matter contained in vegetables, which readily undergoes decomposition on standing, especially in warm weather. Cold water, it is true, dissolves the vegetable albumen, while both hot and cold dissolve the gum, sugar, extractive, and, perhaps, other principles liable to fermentation. The pure bitter vegetables, as gentian, gold thread, colombo, therefore should be subjected to maceration, or displacement in cold water, and a small portion of spirit afterwards added, if it is desired to preserve them for any length of time. It is well, perhaps, to recollect that tartarized antimony, salts of lead, mercury and silver, are incompatible with one or more of the proximate principles contained in bitter infusions. A cold infusion of wild cherry bark will keep for some days without undergoing any change, owing to the antiseptic influence, perhaps, of the hydrocyanic acid contained in it.

Decoctions.—Decoction is an objectionable method of extracting the proximate principles of plants, inasmuch as many of them are decomposed at a temperature of 212° Fah.; or if not destroyed entirely, their medicinal activity is essentially diminished. If the active constituents are volatile, of course they are dissipated. We have already alluded to the important chemical reactions which take place during ebullition, in consequence of which the active constituents are either rendered insoluble or undergo decomposition. For example, the alkaloids in cinchona bark during ebullition combine with the red coloring principle of the bark, and form a compound nearly insoluble at 60°. Besides the objection, also, that boiling dissolves the starch, which renders a vegetable solution mucilaginous and apt to become speedily mouldy, this process is unnecessary, inasmuch as, in general, the same proportion of water exhausts vegetable substances equally well at 60°, in the way of percolation, as at 212°, in the way of decoction, and often more completely. But, in regard to the pure bitters, the ordinary method of infusion in cold water will answer every purpose.

Solid Extracts.—These, if prepared by steam apparatus, with a vacuum pan, in which evaporation can be carried on rapidly, and at a low temperature, are not only an unobjectionable, but a very valuable and convenient preparation, especially where the pillular form is desirable. Thus the solid extracts of colombo, gentian, quassia, &c., prepared in this manner, and now everywhere to be obtained, are infinitely preferable to the same preparations as formerly made by boiling and evaporation under the ordinary circumstances of pressure and exposure to the air.

Fluid Extracts.—The fluid extracts of the simple bitters, as now prepared by displacement and evaporation, in *vacuo*, are an admirable form for administering this class of remedies. Though unofficinal, they are generally preferable to the infusions or decoctions, when most carefully prepared. They contain all the active proximate principles of the plant, concentrated, and in a form not likely to undergo any change. Thus the fluid extract of gentian is an elegant preparation, which ought to supercede entirely the tincture, infusion, or decoction of the same plant; and the same may be said, indeed, of all the fluid extracts of the pure bitters.

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Tinctures.—The tinctures of the bitter tonics are gradually giving place to the fluid extracts, and ere long will be rarely used, except in cases where the stimulus of alcohol is desirable in connection with the bitter principle. It is admitted, however, that their protracted use is objectionable, from their liability of creating an appetite for alcoholic stimulants. This will be obvious, when we consider that the dose of bitter tinctures ranges from two fluid drachms to half a fluid ounce. It is better, then, and safer to use a fluid extract, adding, if necessary, wine, spirit, or some aromatic tincture, in proper quantity.

Powders.—These, if properly prepared, contain, of course, all the proximate principles of the plant, in their natural condition; but then they contain a large portion of inert, ligneous matter. The dose is large, and often very disagreeable to the taste. Many of them undergo spontaneous change when exposed to the light or atmosphere, especially when moist; and moreover, they are so liable to adulteration, without the possibility of detection, that other preparations of the same vegetables have very generally been substituted for them.

Syrups.—The great objection to this form, in the case of vegetable bitters, is that where the digestive organs are much debilitated, and there is a want of tone in the stomach, sugar is very apt to cause acidity, flatulence, &c. From the agreeable taste and conservative power of sugar, it is well adapted to pharmaceutical purposes; and where there are no objections to its use, a syrup forms a very agreeable and useful preparation; but it seems less suited to tonic than to any other class of remedies. We have in market a syrup of orange peel, of wild cherry, of rhatany, of ginger, chamomile, pipsissewa, uva ursi, blackberry root, horehound, carrageen, &c.; but the pure bitter tonics can very seldom be administered to advantage under this form. As demulcent expectorants, some of these syrups, as of wild cherry, horehound, liverwort, &c., are admirable.

Beers.—The infusions of bitter vegetables generally ferment with yeast, and yield a bitter fluid, which is valuable often as a stomachic tonic. A spirit is thus prepared from gentian in Switzerland, which is much prized as a tonic cordial. Brown sugar and ginger, or other aromatics, may be added in suitable quantity. These fluids should be bottled carefully soon after fermentation has commenced. Dose, from one to four fluid ounces, three times a day.

Iron and Its Preparations.

THERE is in the blood a red coloring matter called hæmatosin. It is found by chemical analysis that iron is an essential part of this substance. The existence of the right amount of hæmatosin in the blood is of vital importance. It is contained in the red globules of the blood. When it is diminished in quantity the number of these red globules is lessened in the same proportion. This produces a paleness of all the tissues, an inactivity of the muscular fibre, and impairment of all the animal functions, and a general languor and debility of the whole frame. This is anæmia.

In all cases in which iron is used there is a deficiency of this red coloring matter; and in all instances of anæmia iron is appropriate as a remedy. In this way it may benefit, and sometimes cure, other disorders in which anæmia is apt to be a prominent symptom. Such are amenorrhea, scrofula, cancer, chronic ague, hysteria, chorea, and Bright's disease of the kidney. Iron ought always to be conjoined with the remedies specially appropriate to each case. In chorea, arsenic or quinine may be used, with or without iron. Aloetic purgatives may be advantageously combined with chalybeates in amenorrhea and hysteria. Their use may be accompanied by cold affusions, or by some antispasmodic stimulant. In scrofula, the iodide of iron affords us a valuable double remedy. In chronic cases of ague, when accompanied with anæmia, as is often the case, iron may be prescribed with advantage. In general anæmia, an occasional purge, a generous diet, with good air and exercise, should be combined, if possible, with the chalybeate treatment.

The astringent salts of iron are particularly appropriate in cases of hemorrhage, for, in addition to their astringent action, they tend to restore the deficient red coloring matter of the blood. In many such instances the sulphate or the sesquichloride of iron may be advantageously prescribed along with sulphuric acid. The above salts of iron are, by their topical action on the stomach, of service in cases of atonic dyspepsia.

When the iron has entered the system, it is not necessarily excreted again from it, because it is not unnatural to the blood; but when it is given in large doses, iron passes off by the urine and by the other secretions. Some portion may be excreted by the mucous membrane of the intestines, and combine in the cavity of the bowel with sulphuretted hydrogen. The resulting sulphuret communicates to the fæces a characteristic black color.

The general contra-indication to the use of iron is plethora and inflammation, producing, when injudiciously employed, heat, thirst, headache, difficulty of breathing, and symptoms of an excited circulation.

Iron must not be compounded with any vegetable bitters that contain tannin, for it forms therewith an insoluble salt—the tannate of iron. It can be used with colombo, quassia and gentian. So acids and acidulous salts must be avoided, except it be the acid forming the particular salt administered.

It is always desirable to prepare the bowels for the exhibition of iron, by the administration of some light purgative. Care must always be taken that, when it is persevered in for a long time, it does got accumulate in the bowels.

Ferri Ramenta (*Iron Filings*).—Dose: five to twenty grains, given in molasses or honey, or made into pills with some bitter extract.

Ferri Pulvis (*Quevenne's Iron*).—Dose: two to five grains, in the form of pill, made with sugar and gum. M. Quevenne considers it, of all the insoluble preparations, the most easily assimilated. M. Coste regards it superior to other ferruginous preparations in engorgement of the spleen succeeding to intermittent fevers.

Ferri Carbonas (*Red Oxide of Iron*).—Dose: as a tonic, five to thirty grains, three times a day, in pill or powder, and frequently combined with aromatics and vegetable tonics. The carbonate of iron is not soluble in water; the bicarbonate is soluble in water, the chalybeate springs holding the bicarbonate in solution. Thirty-six grains of carb. per day, in syrup, have been given in second stage of whooping cough, acting promptly and efficaciously; in neuralgia, chorea and tetanus, in doses of one or two teaspoonsful. Excellent in chlorosis, when the system is prepared for iron. In true chronic neuralgia, and in the severest cases of neuralgia under the form of hemicrania, in large doses, it has proved entirely successful. In tic-doloreux, four drachms have been given.

TONIC POWDERS.

℞.—Ferri Carbonas,
Pulv. Colombo,
Pulv. Ginger, - - - - - - - - *aa.* ʒj.

℞.—Ferri Subcarbonas, - - - - - - - gr. x.
Pulv. Aromatic, - - - - - - - gr. v. M.

Make a powder, to be taken morning and noon.

℞.—Ferri Subcarbonas, - - - - - - - gr. x.
Valerianæ, pulv., - - - - - - ʒ ss.
Syrup Zingib., - - - - - - - q. s.

Fiat volus.

℞.—Ferri Subcarbonas,
Extract Anthemid., - - - - - - *aa.* ʒ ss.

Make twelve pills. Dose: two, three times a day.

℞.—Ferri Subcarbonas, - - - - - - ʒ i.
Hydrarg., - - - - - - - - ʒ ij.
Confect. Rosæ, - - - - - - - ʒ iii. M.

Dr. Collier recommends this as especially eligible for the strumous, the irritable, and the reduced anæmic constitutions requiring mercury.

℞.—Ferri Subcarbonas,
Confectio. aurant, - - - - - - *aa.* ℥j.

Syrup Zingib.,	q. s.

Make an electuary. Take a small teaspoonful, two or three times a day.

℞.—Litharge Plaster,	℔ ij.
Frankincense,	℔ ss.
Ferri Subcarbonas,	℥ iii.

In muscular relaxation and weakness of the joints.

The emplastrum ferri, ferrum ammoniatum, and tinctura ferri chloridi, are the officinal preparations of the subcarbonate. The ferri carbonas saccharatum has the advantage of being readily soluble in the acids. Dose: five to thirty grains.

FERRI IODIDUM (*Iodide of Iron*).—Dose: one to five grains. Soluble in water and alcohol. Combines the alterative properties of the iodine with the tonic powers of the iron. Used in scrofulous affections, chlorosis, incipient scirrhus, bronchocele, atonic dyspepsia, and general debility. A standard remedy in secondary syphilis, in combination with iodide of potassium. Likewise used, with great success, to remove the consequences of syphilis.

℞.—Ferri Iodide,	gr. xvi.
Tincture Colombo, or	
" Gentianæ Comp.,	f. ℥ j.
Aquæ Destillat.,	f. ℥ vii.

Dose: two tablespoonsful, two or three times a day.

℞.—Ferri Iodide,	gr. iii.	
Aquæ Destillat.,	f. ℥ vi.	M.

As an injection in gonorrhœa.—*Ricord.*

Syrup of the Iodide of Iron.—The saccharine matter is supposed to prevent its oxydizing. This combination prevents idism. Twelve minims of the syrup of iodide of iron is equal to one grain of iodide of iron. Dose: twenty to fifty drops.

The pillulæ ferro iodide are officinal. Each pill contains a little over a grain and a half of iodide of iron.

FERRI BROMIDUM (*Bromide of Iron*).—Tonic and alterative, in tetter, scrofulous tumors, inflammation of the glands, both acute and chronic, erysipelas, and amenorrhea.

℞.—Ferri Bromidum,	ʒ j.
Extract Glycyrrhiz.,	q. s.

Make sixty pills. Dose: one or two, morning and evening, in cases of scrofula and hypertrophy of the uterus especially.

Syrup of Bromide of Iron.—An eligible form for administration of bromide of iron is the following:—

℞.—Bromine,	200 grains.
Iron Filings,	85 "
Water,	f. ℥ ivss.
Sugar,	℥ iij.

Make a solution in the manner directed for preparing the officinal solution of iodide of iron. Dose: twenty minims, three times a day, gradually increased.

TINCTURA FERRI CHLORIDI (*Muriated Tincture of Iron*).—Dose: ten to thirty minims. Powerful astringent and tonic. In large doses, every few hours, in erysipelas. Externally in cancrum oris. Given in infusion of tansy, quassia, or in simple water; in all hemorrhages of a passive character; in the gastric hemorrhage of old drinkers, fifteen to twenty-drop doses; in discharge of blood from the urethra, and in leucorrhea; as an astringent in excessive sweating. As antidotes to this mixture, if taken in poisonous doses, give demulcents, mucilaginous drinks, &c.

℞.—Tincture Ferri Chloridi,	ʒ iss.	
" Opii,	ʒ iss.	
Sulphate Quiniæ,	grs. viii.	
Aquæ,	℥ vi.	M.

The tinct. ferri chloridi has lately been brought forward, with the highest encomiums, as an internal agent in the treatment of erysipelas, whether idiopathic, traumatic, or the erysipelas of infants. It is necessary to bring the system rapidly under its influence.

FERRI SULPHAS (*Sulphate of Iron*).—Astringent, tonic, emmenagogue. Dose: one to five grains. In debility of the alimentary canal, and ulceration of the colon, with constant pains, it acts as a tonic and astringent. To arrest exessive perspiration, give two grains at bed time. It is beneficial in diseases attended with immoderate discharges; useful in amenorrhea, occurring when there is neither marked plethora nor anæmia. Its external use is very varied, depending on its astringent and tonic properties. In old ulcers, in solution from one drachm to one ounce, in a pint of water. As a collyrium, five to ten grains to six ounces of rose water, in sub-acute inflammation of the eye. One grain to the ounce of water, as an injection in prolapsus ani of children: passed up the bowel, once or twice a day; also to complete the cure of internal piles.

The officinal preparations of the salt are numerous.

℞.—Ferri Sulphas,	12 grains.
Morphia Sulphas,	3 "
Extract Gentian,	q. s.

Make twenty-four pills.

℞.—Pulv. Myrrh,	ʒij.
Sodæ Carbonas,	
Ferri Sulphas,	*aa.* ʒj.
Syrup simple,	q. s.

Make eighty pills. Dose: two to six, three times a day.

℞.—Ferri Sulphas,		
Gum Myrrh,	*aa.* ℈ij.	
Potassæ Carb.,		
Sapon. Purif.,	*aa.* ʒss.	M.

Make forty pills. Dose: two, morning, noon and night, in suppression of the menses.

Ferri et Aluminæ Sulphas.—Dose: five to ten grains, in any aromatic water, or in molasses. A superior astringent in the treatment of chronic diarrhœa, dysentery and cholera morbus, and the colliquative diarrhœa and sweats of the consumptive. Applied externally, it is a powerful styptic, and may be used in epistaxis and in hemorrhage from leech bites. Also, as a gargle in relaxation of the uvula and fauces, and in the cynanche of scarlatina.

Ferrocyanide of Potassium.—ʒij. to f.℥j. water. Dose: for an adult, thirty to forty-five drops. Sedative, tonic, astringent. Dr. Eberle regarded this salt as advantageous to women in the change of life, and in chronic uterine hemorrhage with great uterine debility. Its astringent powers are most manifest in the colliquative sweats of chronic bronchitis and phthisis.

Mistura Ferri Aromatica.—Tonic, in doses of one or two fluid ounces.

Mistura Ferri Composita.—Dose: one or two fluid ounces, three times a day, in debility of the digestive organs, especially when attended with derangement of the menstrual function. Hence it is used in chlorosis and hysterical affections.

Cubebs.

(PIPER CUBEBA.)

THE plant which affords the officinal Cubebs is a native of Java (where it is called *cumac*), Nepaul (there called *timmue* and *taizbul*), Sierra Leone, and the Isle of France. It belongs to the natural family *Urticeœ* of De Candolle and *Piperaceœ* of Lindley, and to Linnæus' class and order *Diandria Trigynia.*

It is a small climber, and produces clusters of small berries, scarcely so large as white pepper, which are the officinal part of the plant, and with which our readers are no doubt familiar.

Chemical Properties.—Three analysis of Cubebs have been made—one by Tromnsdorff, in 1811; a second by Vanquelin, in 1820; and a third by Monheim, in 1835. The latter found, in one hundred parts—

Green Volatile Oil,	2.05
Yellow Volatile Oil,	1.00
Cubebin,	4.05
Balsamic Resin,	1.05
Wax,	3.00
Chloride of Sodium,	1.00
Extractive,	6.00
Lignin,	65.00
Loss,	15.05
Total,	100.00

Vanquelin describes two resins—one green, liquid, acrid, and analogous, both in odor and taste, to balsam of copaiba; the other brown, solid, acrid, and insoluble in ether. *Cubebin* is a crystallizable substance, obtained, according to Nollinberger, of the United States Naval Hospital, New York, by exhausting the Cubebs from which the oil has been distilled, by alcohol of sp. gr. 0.85; driving off the alcohol, setting aside the resinous matter which remains, for several days, till it forms a mass of crystals. By dissolving again in hot alcohol, and filtering through animal charcoal, it may be obtained in beautiful white, needle-shaped crystals. It is very analogous to piperine, but differs from it in composition, as it contains no nitrogen. Cassola, a Neapolitan chemist, says it is distinguished from the piperine by the fine crimson color which it produces with sulphuric acid, and which remains unaltered twenty-four hours.

Cubebs deteriorate by age, particularly if in the powdered state, and become weaker in consequence of loss of their volatile oil. They are found adulterated with *pimento* and species of the Piper family. Mr. Carney, in his report upon adulterations, speaks of a false berry used for this purpose, which is readily distinguished, as it is *bi-lobed*, while the Cubeb is a *single-lobed berry*. Fifteen per cent of it existed in one lot of Cubebs. The berry is inert and worthless, and is not possessed of any deleterious property. The name the committee were unable to ascertain.

Dr. Ainslie, in his Materia Medica of Hindostan, says that Cubebs were used by the Indian practitioners as a grateful stomachic, carminative, and seasoner; but there does not appear evidence that they were known to the ancients. The Arabians place them among their mudorrat (*stimulantia*). The Mahometans not unfrequently employed them in cases of gonorrhœa and gleet. Mr. Crawford, author of the History of the Indian Archipelago, was the first who wrote on them. His communication appeared in the Edinburgh Medical and Surgical Journal for January, 1818, which was followed by a paper in the same journal by Dr. Adams, by Dr. Jeffreys, and others. Dr. Ainslie says:—"The German and other physicians on the Continent at the time that Murray wrote, (at Gottingen, in 1790,) do not appear to have been at all aware of those virtues which Cubebs have since been found to possess, and that that distinguished writer (Murray) thought they may prove serviceable in certain dyspeptic affections, and the vertigo consequent upon such complaints."

The experience of medical men confirm their action on the human system to be stimulant, possessing the property of arresting excessive mucous discharges, especially from the urethra. Pareira says of Cubebs:—"Taken in moderate doses, they stimulate the stomach, augment the appetite, and promote the digestive process; in large quantities, or when the stomach is in an irritated or inflammatory condition, they cause nausea and many unpleasant symptoms. They appear to exercise a specific influence over the urino-genital apparatus, act frequently as a diuretic, and at the same time deepen the color and cause a peculiar aromatic odor to the urine."

The principal use of Cubebs is in the treatment of gonorrhœa. The same considerations that apply to the use of copaiba are applicable to the use of Cubebs. They are usually given in as large doses as the stomach can bear, in the early stage of the disease. According to Pareira, experience has proved that in proportion to the length of time the disease has existed it is less amenable to the influence of this remedy. In some instances an immediate stop is put to the progress of the disease; and he does not consider that the presence of active inflammation of the urethra as positively precluding their use, and has seldom seen them aggravate the symptoms; and, in considering the ill effects attributed, as swelled testicles, he has not known it to be more frequent than when they were not used.

Dr. Jeffreys considered it not only a safe remedy, but in a generality of cases more useful and expeditious than any which had been introduced into practice; that it possesses what may be justly called a specific in most constitutions, especially when used in the early and acute forms of the disease; and, contrary to Sir Astley Cooper, "that such expedients are improper when much inflammation exists, or the patient is of an irritable habit," asserts "that it is in the more inflammatory forms of the disease in which its efficacy is most certainly displayed."

Each mode of treatment appears to have had, and yet has, its advocates; and there are not a few who doubt its curative powers. But the mass of evidence in its favor can leave no doubt upon this point. The only question which we have to meet is the proper time of administration. There are physicians who administer both Cubebs and copaiba in every stage of the disease. Dr. Boughton gave Cubebs in fifty cases. Ten were cured in from two to seven days, seventeen in from eight to fourteen days, eighteen in from fifteen to twenty-one days, and one on the fifty-fifth day. In four only was no benefit obtained.

In the chronic stage of gonorrhœa, Ricord gives Cubebs in combination with sesqui oxide of iron, with injections, four times a day, of solution of two grains of nitrate of silver to eight ounces of water; and as an opiate in gonorrhœa, Dr. Berton recommends the following:—

℞.—Pulverized Cubebs, - - - - -	**2 ounces.**
Balsam of Copaiba, - - - -	**2 "**

Alum,	1 ounce.
Extract Opii,	5 grains.

Of this mixture, give one drachm, night and morning, in the pulp of a prune, increasing the dose to two drachms, morning and evening.

The *Journal des Connoissances Médicales* recommends very highly the combination of Cubebs and alum in the treatment of gonorrhœa; adduces several cases illustrative of its efficacy, and remarks that " it is more than probable that alum has not been used in cases of gonorrhœa as much as it deserves to be; that the salt is rapidly absorbed into the system, and is eliminated in a great measure by the urine, as appears from numerous experiments."

The formula is :—

℞.—Powdered Cubebs,	2 ounces.
Powdered Alum,	½ ounce.

Mix well. Divide into nine doses, of which one is to be taken every eight hours.

Dr. Deiters found Cubebs more effectual than any other remedy in curing the incontinence of urine common to children. This complaint may, he says, depend on atony of the bladder or the presence of intestinal worms. In the former case they act as a tonic, and in the latter as a valuable anthelmintic. Cubebs should be given in considerable doses—a few grains for infants, and half a teaspoonful, two or three times a day, for children of somewhat more advanced age. Its effect is usually speedy and permanent. It may happen that the incontinence will return at periodical or irregular periods, but these recurrences will become less frequent, and eventually disappear altogether. He has, in some cases, found it necessary to continue its use three to eight weeks, without observing any injurious effects.

Dr. Deiters also states that he found it most efficacious in checking nocturnal emissions in cases of spermatorrhœa.

In leucorrhœa and blenorrhœa they have been highly recommended by many practitioners. The following formula was suggested by Ryan :—

℞.—Cubebs, pulv.,	1 ounce.
Ergot, "	½ "
Aromatic, "	2 scruples.
Sugar,	1 drachm.

Divide in eight parts. Give one, three or four times a day.

In abscess of the prostrate gland, twenty to thirty grains, three times a day, have proved beneficial; also, in cysterrhœa and piles they have, in several cases, proved serviceable.

In catarrhal affections of the membrane lining the ærian passages; in inflammation attended with increased discharge of the Schneiderian membrane lining of the nose, and the sinuses communicating with it; in aphonia; in defective audition caused by catarrhal affection of the eustachian tube, Cubebs have been found exceedingly serviceable, either by chewing the whole berry or in the form of the following lozenge, called SPITTA'S LOZENGES:—

℞.—Powdered Cubebs, - - - - -	2 drachms.
Balsam Tolu, - - - - - -	6 grains.
Mix, and add	
Extract Liquorice, - - - - - -	1 ounce.
Syrup of Balsam Peru, - - -	1 drachm.
Gum Arabic, - - - - - - -	q. s.

Rub well together, and form lozenges of ten grains.

Dr. Fosbroke commends their use in cases of inflammation of the mucous membrane of the intestinal canal, conjoined with the oxide of bismuth, as follows:—

℞.—Powdered Cubebs, - - - - -	2 drachms.
Sub-Nitrate of Bismuth, - -	½ "
Mucilage of Gum Arabic, - - -	½ fl. ounce.
Syrup, - - - - - - -	6 fl. drachms.
Water, - - - - - - -	6 fl. ounces.

Dose: a tablespoonful four times a day.

And in cases of chronic inflammation of the œsophagus, in union with carbonate of soda, as follows:—

℞.—Powdered Cubebs, - - - - -	2 drachms.
Carbonate of Soda, - - - -	½ "
Mucilage of Gum Arabic, - - -	6 fl. drachms.
Mint Water, - - - - - -	6 fl. ounces.

Dose: tablespoonful every hour.

At another time I shall consider further the uses of Cubebs and the formulæ for their convenient administration, and also the various formulæ published for the preparation of a fluid extract—a form of preparation the most convenient of any now in use, and which should be so prepared as to represent all the medicinal properties of the article. A.

The Cinchona Alkaloids and Their Salts.

QUINIDIA.

(*From Parish's Practical Pharmacy.*)

This name is now generally applied to an alkaloid which is isomeric with quinia, but differs from it in turning polarized light to the right. It occurs, in company with the other alkaloids, in many cinchona barks, particularly those imported from New Granada.

It is obtained from its sulphate by decomposition with ammonia, and crystallizes in shining, colorless efflorescing crystals, which are readily reduced to a white powder; they melt without decomposition, and, on cooling, concrete into a grayish-white crystalline mass. When ignited, they burn with the odor of kinole and the volatile oil of bitter almonds; they have a less intensely bitter taste than quinia. This alkaloid is nearly insoluble in water, soluble in twelve parts of alcohol and 143 of ether, and its solution turns to a green color like quinia when successively treated with chlorine water and ammonia; a solution of either alkaloid even in 700,000 parts of water, according to Herapath, shows a dispersion of light with a bluish milky coloration. Quinidia, treated with tincture of iodine under the same circnmstances as quinia, yields crystals which appear garnet red by transmitted light, and bluish red in reflected light. Quinidia is the only cinchona alkaloid yielding, with the solution of an iodide, a nearly insoluble precipitate, hydriodate of quinidia.

Quinidiæ Sulphas is more soluble than sulphate of quinia, and remains in the mother liquor after the quinia salt has been crystallized. When the cheaper barks above referred to are manipulated with, this salt is an important product; it is largely produced, and by some used as a substitute for quinia. As generally found in commerce, it contains cinchonidia, and comes in long, shining white crystals, interlaced, and resembling those of sulphate of quinia. It is soluble in 130 parts of cold water, freely soluble in alcohol, and almost insoluble in ether. It contains six equivalents of water of crystallization.

Cinchonia.—This is another unofficinal alkaloid usually accompanying quinia. Huanuco bark contains almost exclusive cinchonia, which, when first isolated from this bark, was called huanucina, under the supposition of its being a distinct alkaloid. It may be obtained from this bark by a process similar to that for the preparation of quinia. It is in white needles, insoluble in alkalies, ether and cold water, but soluble in thirteen parts of boiling alcohol; chloroform dissolves 4.3; olive oil, one per cent of cinchonia. It is less bitter than quinia and quinidia, fuses at 330° to an amorphous mass, and at a higher temperature partly sublimes without decomposition; polarlized light is deviated to the right.

Its salts are generally more soluble than the corresponding salts of quinia; they are precipitated by the caustic alkalies and their carbonates; and in not too diluted solutions the bicarbonates likewise cause a precipitate after the previous addition of tartaric acid. Under similar circumstances cinchonia does not produce the reaction of quinia with chlorine and ferrocyanuret of potassium. The precipitate of ferrocyanide of potassium in cinchonia salts is insoluble in an excess of the precipitant, but crystallizes from its hot solution; its composition corresponds with the quinia salts. The cinchonia sulphate, if treated with iodine similarly to sulphate of quinia, yields a brick-red deposit.

Cinchoniæ Sulphas.—If cinchonia occurs in barks with quinia and quinidia, this salt remains behind in the mother liquor after the crystallization of the other sulphates.

It crystallizes in white pearly oblique prisms, containing $2HO$, soluble in fifty-four parts of cold water, in seven parts of alcohol, not in ether. On the addition of sulphuric acid it passes into the very soluble acid sulphate. The other salts of cinchonia may be prepared like the corresponding quinia salts. The following have been occasionally used:—

Cinchoniæ murias is in silky prisms, easily soluble in water and alcohol.

Cinchoniæ hydroiadas crystallizes in needles.

Cinchoniæ tannas is a yellowish powder, soluble in alcohol.

Chinchoniæ Acetas.—If acetic acid is saturated with cinchonia, on evaporation granular or scaly crystals of the acetate are left, which are easily soluble in water.

Cinchonidia often constitutes the greatest part of commercial quinidia; as it contains no water of crystallization, it is not efflorescent in the air.

Its principal peculiarities are: solubility in ether, deviation of polarized light to the left, and no reaction with chlorine water and ammonia. By Dr Herapath's test, viz: treating with iodine like quinia, the resulting iodosulphate of cinchonidia is so similar in appearance to the corresponding quinia salt, that it can only be distinguished from it by a little difference in the tint caused by transmitted light.

The base discovered by Wittstein, and called by him cinchonidia, is a mixture of various alkaloids, but principally of cinchonia and Pasteur's cinchonidia.

Quinicia and Cinchonicia.—The acid sulphates of quinia or cinchonia, if heated for three or four hours to about 250° or 266°, are converted into alkaloids, isomeric with the original bases, the former into quinicia, and the latter into cinchonicia, and but very little coloring matter; the neutral salts suffer partial decomposition at that temperature after melting. Both are nearly insoluble in water, soluble in alcohol, easily combine with carbonic acid, deplace ammonia from its salts, and deviate the polarized light a little to the right. The optical behavior of the different alkaloids, therefore, is as follows:—

Quinia, considerably to	left.	Cinchonia, considerably to	right.
Quinidia, "	right.	Cinchonidia, "	left.
Quinicia, feebly	right.	Cinchonicia, feebly	right.

Chinoidina, or Quinoidina, is a product of alteration of the cinchona alkaloids. Drying of the barks, or exposure of solution of alkaloids to the sun, and the influence of a high temperature, appear to favor this alteration. It is prepared by precipitating the mother liquor, from which the sulphates of the other alkaloids have been crystallized, by carbonate of soda, and extracting with alcohol.

It is a reddish-brown, resin-like mass, entering into combination with acids like the unaltered alkaloids. The salts are resinous, uncrystallizable, very bitter. It is isomeric with quinia, and has, therefore, been also called amorphous quinia. Pasteur supposes it to be uncrystallizable quinicia and cinchonicia.

It has strong febrifuge properties, and is very efficient in doses double of that of the sulphate of quinia, either in pills or dissolved with a little sulphuric acid.

Precipitated Extract of Bark is the same preparation as the above. It differs from the extractum calisayacum, referred to on page 186, by not containing the crystallizable alkaloids.

Of the remarkable principles above described as existing in cinchona barks, cinchonia was the first discovered, having been isolated in an impure state as early as 1808, and fully described as an alkaloid by Pelletier and Caventon in 1820. Quinidia was discovered soon after by the same chemists. Not until 1833 was the existence of quinidia announced. In that year, Henry and Delondre announced its discovery, but afterwards abandoned the idea of its being a distinct principle; so that no further attention was bestowed upon it until, about the year 1844, the celebrated German chemist, Winkler, investigated its properties, and conferred upon it the name quinidine, which, to correspond with our nomenclature, is changed to quinidia. Pasteur has since proved that quinidia, as it occurs in commerce, is generally composed chiefly of another alkaloid, to which he gave the name cinchonidia; he likewise discovered the artificial isomeric alkaloids quinicia and cinchonicia.

On page 407 will be found an account of other similar alkaloids, discovered in particular barks, and most of them not fully investigated.

The former scarcity and high price of sulphate of quinia, occasioned in part by the restrictions placed upon the trade in genuine Calisaya bark, by the Bolivian government, had the effect to direct the attention of physicians to other and similar remedial agents; but, notwithstanding the frequent announcement of favorable results from the trial of such, there seems a general disposition to withhold confidence from any but the products of that remarkable family of South American trees, whose history has been so long connected with the cure of periodical diseases. The introduction into commerce of large quantities of cheap cinchona barks, from new sources, has been another result of the long-continued scarcity of the older and officinal kinds. Notwithstanding these have been regarded by many with jealousy, and doubts have been entertained of their therapeutic value, the study of their chemical history has shown that some of them are not less rich in alkaloids than the finest monopoly barks, and experiments in regard to the therapeutic value of their characteristic alkaloids have shown a close resemblance in physiological effects to quinia itself. Some Bogota barks are now extensively employed for the manufacture of quinia, the price of which has, in consequence thereof, considerably decreased; these barks, beside the other alkaloids, abound in quinia.

Dr. Pepper, and other practitioners connected with hospital practice, have used sulphate of quinidia in the same or less doses than the quinia salt, and with equal success; and its value and efficacy are confirmed by the experience of others in private practice.

Sulphate of cinchonia, which had been generally overlooked, has also been much used of latter time as a substitute for the quinia salt; and, although some physicians assert that larger doses of it are required, I am told by Dr. Conrad, the apothecary of Pennsylvania Hospital, that in that institution the three cinchona alkaloids are used indiscriminately, and in the same doses. Through Dr. R. P. Thomas, I am informed that the cinchonia salt has been used with satisfaction as a substitute for that of quinia in the Philadelphia and Northern Dispensaries, in the Western Clinical Infirmary, and Philadelphia Hospital, Blockley, where many intermittents are daily under treatment.

[TO BE CONTINUED.]

Discussions on Diphtheria.

PROCEEDINGS OF THE CINCINNATI ACADEMY OF MEDICINE. REPORTED FOR THE JANUARY NUMBER OF THE LANCET AND OBSERVER, BY DR. J. A. THACHER.

Prof. Comegys introduced the subject of diphtheria for discussion, in which a large number of the members participated.

Prof. C. stated that, within the last month or so, he had met with quite a number of cases of this disease in his practice. As met with by him, it was characterized by soreness of the throat, swelling of the uvula and tonsils, with deep ash-colored ulcerations on the latter—the ulcerations being more remarkable for their depth than the extent of surface they covered. In none of the cases was there any fever; indeed, he considered the disease quite distinguished for the little arterial excitement manifested in it.

In many cases he had seen, the ulceration appeared to commence at first on one tonsil, and then to be communicated, as it were, to that of the opposite side by juxtaposition. In but few cases was the larynx affected, and then but slightly; in nearly all, however, the pharynx was more or less involved, and in a few instances the ulcerations were wholly confined to it.

The disease, he said, was frequently very insidious in its progress. The constitutional symptoms were often so very slight that he had known it to make very considerable progress before its invasion was suspected. In some cases, a little soreness of the throat, or slight difficulty in swallowing, was the only symptom complained of. He had now under treatment a young lady, some eighteen years of age, who had had the disease several days before she or her friends were aware of it. Previous to her attack the mother and a little brother had been affected; the case of the former, however, was slight, yielding readily to common gargles. On examination he found the whole throat inflamed; the uvula was swollen and dropsical, and at its extremity clubbed, and upon corresponding points of each of the tonsils there was a deep ash-colored ulceration. There were no constitutional symptoms whatever.

Previous to seeing her, she had been using for the slight soreness and difficulty she experience in swallowing, a chlorine wash that he had prescribed for her brother. The case representing rather a serious aspect, he made an immediate application of the solid nitrate of silver to the throat, cauterizing the ulcers freely, and ordered a wash consisting of a strong solution of the same in water. Afterwards he substituted the hyposulphite of soda, as recommended to him by Dr. Heighway. His internal treatment consisted in the administration of iron, beef tea, and wine whey. The throat symptoms are now improving.

At one time he collected some of the exudation from the tonsils and placed it under his microscope. He was, however, unable to discover anything but simple pus cells, in which were some fibres of vegetable matter, which he thought probably might have been detached from his handkerchief while cleaning the instrument.

In some instances he had known this disease to terminate fatally, within twenty-four hours of its invasion, in slough. He related the case of a little boy he had lately attended, who died of this complication within a few hours after his attack, and almost in the midst of his play.

The Professor related several other cases he had met with, illustrative of the character of the disease, its insidious course, and often fatal termination when least expected. Among others, he mentioned the case of a young man affected with the disease, in which the whole soft textures of the mouth and throat became covered with a grayish-white exudation of a sphacelated appearance. Indeed, so gangrenous in appearance were all the textures, that he and Dr. T. Wood, who was called in consultation, were inclined to think that gangrene had taken place. In a short time, however, this membrane became detached, disclosing the inflamed surface of the textures beneath. The patient died.

In his treatment he was in the habit of applying topically caustics freely to the throat, as the nitrate of silver in substance, or a strong solution of it in water. Sometimes, when the ulcerations were deep and extensive, he touched them with strong nitric acid, by means of a brush. In some cases he had employed, with considerable benefit, inhalations of tannic acid dissolved in sulphuric ether. This formula was:—

℞.—Tannic acid, ... f. ʒ ij.
Sulph. ether, ... f. ℥ j. M.

With this a cloth was wetted and placed in the mouth.

He based his internal treatment on general principles, always being careful to husband the strength of the patient. When indicated, he administered tonics and stimulants freely, as iron, bark, wine, &c., with nourishing diet.

Dr. HEIGHWAY said that Dr. Leidy had demonstrated, by means of the microscope, the identity of the exudation in diphtheria with that of the fungi of the yeast plant. Sulphurous acid was peculiarly destructive to it. On account of its very soon decomposing when uncombined, it was used in the form of a salt, as the hyposulphite of soda. Two drachms of tannin to a pint of glycerine, applied by means of a probang, had been used with the best effects.

Dr. W. JUDKINS observed that he thought much injury was often done by caustics. He, for his part, never employed them. A gentle stimulant, in the form of a mild lotion, was all that was necessary in their topical treatment. His favorite formula was eight grains of the iodide of zinc to an ounce of water.

The old maxim "*ubi irritatio, ibi fluxus*," he believed was correct, and as caustics were undoubtedly irritants, their effects must be rather to excite inflammation than to subdue it. He had learned from observation, that when an eschar was removed from a cauterized ulcer, there would be disclosed beneath an ulcer larger than the first. If, then, cauterization be the rule, it must be done again and again, and he could not see when it was to terminate.

Dr. BONNER, Sr., following in some remarks, said that he could not agree with Dr. Judkins in his views of the effects of cauteries. He himself did not consider them irritants, nor could he understand how they could act as such. The action of nitrate of silver, one of the so-called cauteries, upon an ulcer, according to his experience, was not to irritate it or *burn* it, but, besides stimulating it to healthy action, to coagulate the pus and other secretions, so as to form a scab under which granulations might spring up.

Further, he remarked, he believed that many of the cases of sore throat now prevailing were improperly called diphtheria; that many of them, if not the majority, were nothing more than the ordinary affections produced by cold. He was rather inclined to think that the *European trips* of some of the professional brethren had made them somewhat dissatisfied with such old names as quinsy.

The Doctor related several cases in his practice of throat affection, one of them a woman that was attacked immediately after confinement, that yielded to common astringent and stimulating gargles, which he thought probably many would have considered cases of diphtheria. He himself, however, could not see anything more peculiar in them than in the sore throats of *old times*.

Prof. COMEGYS said that he explained the beneficial action of cauteries upon ulcerations by their substituting an inflammation of their own in place of the diseased one. He did not think an increase of inflammation followed their use—rather a change in character.

Dr. WHITE reported several cases of the disease he had met with. He treated them successfully with iron, chlorate of potash, and astringent gargles. In several of them the external glands were much swollen; in one case particularly the whole of the glands beneath the jaw were so much swollen as almost to prevent the slightest opening of the mouth. All external applications that he employed in the form of liniments, tincture of iodine, poultice, &c., appeared to be of little or no benefit.

Prof. **Mendenhall** stated that in such cases he had frequently derived considerable benefit from the application of the tincture of iodine and poultices of slippery-elm bark.

Prof. M. reported a case of croup that supervened upon an attack of diphtheria. The remedies usually employed in that disease were used—the patient recovering.

Dr. **Stevens** stated that he had recently received a letter from a very intelligent physician near Pomeroy, Ohio, detailing the symptoms of an epidemic prevailing in that vicinity, which, from the features described, was undoubtedly diphtheria. One marked peculiarity of the epidemic described was a loss of strength and power of locomotion attendant upon a large proportion of the cases, after recovering from the acute symptoms. Dr. S. said that he had observed accounts of this same sequel to diphtheria related in the medical journals of the day, and inquired if the gentlemen present had observed such results in any of the cases which they had treated.

From the New York Times, Jan. 6.

DISCUSSION ON DIPHTHERITE IN THE NEW YORK ACADEMY OF MEDICINE.

The President, Dr. J. **Watson**, stated what was especially desired was the differential diagnosis of croup in its varied forms, and called upon Dr. Douglass as having particular experience in those classes of diseases.

Dr. **Douglass** stated that he divided croup into spasmodic inflammatory with false membrane, and diphtheritic, and proceeded to describe the peculiarities of the latter, which differed markedly from that of the other classes. Especially there was a discharge from the nostrils of a profuse, somewhat colored secretion; the countenance was flushed, very differently from the color in croupy pneumonia, but of a yellowish-red color. The sound of the cough was moist, and in croup sonorous and metallic. The breathing is not difficult, as in croup, but there is an utter prostration of all the powers. The treatment of diphtheria was the opposite to that of croup. He thought it possible that large doses of calomel might be of utility in inflammatory croup, although he had never given it; but the treatment of diphtheria should be sustaining—quinine and iron—and as it was a blood disease, he considered calomel particularly inadmissible. He approved of topical applications to the throat, and if emetics were necessary, those should be given which were mechanical, acting without prostration.

Dr. **Barker** had seen this disease last year in Albany and Troy, but none in New York till this last fall. He thought that it was now the general idea that it was a blood disease, with a local development affecting the throat and nares generally, and with an exudation of false membrane. He had seen it in especial localities, and in that region there were also cases where the membrane was exuded on mucous surfaces other than the throat, and related a case of this character marked by great rectal and vesical tenesmus, overcome only by chloroform and injection of solution of nitrate of silver. Chlorate of potassæ and quinine in full doses was the treatment he had used, particularly in some cases seen with Dr. Jacobi. There was a tendency to a destruction of tissue, and debilitating emetics could not be well borne. He preferred the turpeth mineral, first recommended by Dr. Hubbard, of Maine, in 1840, which acted speedily and without prostration.

Dr. Gardner resumed the discussion of diphtherite, by saying that he had seen some cases of the disease; and while he agreed with Drs. Douglass and Barker in the views they had expressed, thought they had omitted two distinct features peculiar to diphtherite; that it was not only epidemic, but eminently contagious, and that a disagreeable diagnostic smell always accompanied the flow from the nose. He thought that a vigorous tonic treatment and local application to the throat were demanded. The membranous exudation, he thought, differed from that of membranous croup by being less strong and tenacious, and not ever, in his experience, running down so as to make casts of the bronchi. He trusted that Dr. Jacobi, who had just entered, and who had a large experience in this disease, would give his views.

Dr. Jacobi thought that the main feature of the disease was the dissolution of blood, while the membrane, he thought, was not different in any respect from that in croup. He had seen it thrown off in all shapes and thicknesses—even one-eighth of an inch thick—from the tonsils; and although it was generally limited to the tonsils and velum palate, he had seen it on every mucous membrane of the body. Croup, he considered, to be merely the filling up of the air passages with fibrine, and did not thus differ from diphtherite. The latter, however, is an epidemic disease, which he had never known croup to be, but sporadic. He thought no one had ever seen more than a few cases in a year, while in dispensary, private practice and consultations, he must have seen between three hundred and four hundred cases within the last eight months. When the membrane descends into the trachea, he considered it to be croup. He sees no difference between the two diseases, except in the dissolution of the blood. Tracheotomy in this disease is never successful.

Dr. Douglass inquired if he had ever found albuminaria, which the French state accompanied this disease.

Dr. Jacobi—He had examined the secretion of the kidneys in about fifteen cases, and had found it only in about twenty-five per cent, and in those only in the early stages of it. He had noticed the smell mentioned by Dr. Gardner in every case, but had never seen any such in croup, and considered this as important for diagnosis. He saw no utility in applying caustic to the membrane on which the membrane had exuded, and is of no value to the surface from which it has been thrown off; but he touched the parts around to prevent the inflammation from spreading. It took several days for the membrane to become detached, and had never seen this hurried by the caustic application; besides, it does no injury upon the pharynx, never interfering with the respiration.

The general treatment in slight cases, upon which he relies, is the chlorate of potash, from a half to one drachm, in divided doses, per day, to a child from six months to four years old, and three drachms per day to those older. He thought that the treatment, though slight, is of the utmost importance, and should be continued for many weeks, and even months, with the addition of iron, (the muriatic tincture in preference,) as there is constant danger for a considerable period of the reappearance of the disease.

In severe cases the chlorate of potash is too slow when used alone, and he is accustomed to combine with it, or oftener precede it, by a few large doses of quinine. He preferred the solution in water with an addition of acid, because he had found that some cases did very well when treated by acids alone —generally the muriatic.

The severe cases of children, which came on very suddenly, are very apt to be fatal, from the overwhelming effect on the general system of the poison of the disease. It often reappears in children, after the lapse of three or four weeks even, and notwithstanding that the treatment has been kept up of quinine and iron, conjoined to a nutritious diet—beef tea, &c.—these cases generally ended with convulsions of a mild sort, but yet marked, although differing much from the convulsions attendant upon scarlatina.

Where the running from the nose was very excessive and offensive, he had been in the habit of making injections of a solution of chlorate of potash, and oftener of chlorate of soda, as the latter will dissolve in four parts of water, while the former requires sixteen. He had also repeated the experiments of French investigators, and was convinced that the latter is a better solvent of plastic exudations.

Dr. BARKER thought he had misunderstood the last speaker in his pathological views, and inquired if he considered, as he had inferred, that croup and diphtheria were the same?

Dr. JACOBI replied—By no means. Croup he considered a local disease, but diphtheria was a blood disease. The membrane, in each case, he had said was identical.

Dr. BARKER said that, therefore, there was no point of controversy between them. In croup, the local difficulty precedes the general disturbance, while the opposite is the case with diphtheria. In the latter, too, death rarely occurs from obstruction of respiration, as is the case almost always with the former.

The President was happy in having elicited this valuable discussion, because of the discrepancy of the statements of writers abroad—some stating that croup was contagious, while others ridicule this opinion. He drew the attention of the Academy to the writings of Guersant in the Dictionary of Medicine, and the contemporary productions of English writers, &c. He thought that this subject was one of great importance, and it might be profitably continued.

Dr. Douglass inquired of Dr. Jacobi respecting the distinction in the countenance in cases of croup and diphtheria—in the former being pale, and in the latter not exactly flushed, but suffused, of a yellowish red tint.

Dr. Gardner had seen great swelling of the glands and sub-cellular tissue of the neck, and inquired of Dr. J. if he had noted abscesses in various parts of the body, as in the kindred disease of scarlatina.

Dr. Jacobi has noted the color of the face, and attributed it to the little disturbance in the respiration. Abscesses he had noted but a few times; one he particularly remembered, which threatened the life of the patient.

On motion of Dr. Thomas, this subject was made the especial subject for discussion at the next meeting.

Dr. Peaslee presented a new instrument for inhaling chloroform, and after the reading of the names of those elected on the various committees, the Academy adjourned.

From the New Orleans Medical and Surgical Journal, January, 1860.

DIPHTHERIA. BY S. M. BIGELOW, M. D., OF PARIS. COMMUNICATED IN A LETTER TO PROF. WARREN STONE, M. D., OF THE UNIVERSITY OF LOUISIANA.

My Dear Doctor:—I have committed myself in a recent letter to you, in answer to your kind favor of August 26th, in which you asked me to give you my views upon diptheria, membranous sore-throat, or angine couenneuse, by promising to do so when circumstances would permit.

I assure you that I feel great diffidence in commencing this task at this epoch, when since two years this is the subject which has held, perhaps, the first place in medical discussion and observation among the highest medical intelligences in the world. What I have to say will be strictly confined to my own personal views upon the subject. This may seem to you presumptuous on my part, and following too closely the letter of your request, ignoring the spirit of it; but, on the other hand, it would be equally absurd for me to compile a natural history of the disease from documents written by able men during the past two years, which have been accessible to yourself and to other members of the medical profession in America and elsewhere.

So you will understand, my dear doctor, that I have no idea of giving a history of the disease to a novice in medicine, but my own views upon certain capital points in the disease *per se*, and in its relation to menbranous croup, to a veteran in the corps (of which I am but a recruit), who knows both diseases better than myself, and will understand those views without description of the diseases in question. I have, then, but ideas to offer in outline, and will be brief.

In the first place, I tell you, as well as I can in words, some of the differences which exist, in my opinion, between the two diseases, menbranous croup and angine couenneuse; but some of them are only to be siezed by the high faculties of the mind—words can only hint at those points which the reason alone can feel. In one word, it can be felt, but not expressed in its essence.

Firstly, do you understand what I mean when I say that for me the same relative position exists between these two diseases as exists between the intermittent fevers with which you are so conversant in your part of the country and throughout the United States, and the Syrian and Roman forms of intermittent fevers? A difference in the intensity of the poison or ferment certainly, and most probably also in its nature, between the croup and diphtheria, and your congestive fever and intermittent, would be an exaggeration.

In the second place—and this is less transcendental, if you will pass me the word, than my first proposition—the croup, uncomplicated, kills the patient in but one way—by suffocation. The angine couenneuse, uncomplicated, may produce death in three ways: first, during the acute period of the disease, by suffocation; and after the disappearance of all membranous exudation in the larynx, even months after, by the effects of the poison or ferment exhibited in the progressive paralysis which almost always follows the recovery from the acute period of the disease, or by asthenia during an intermediate period. Of this peculiar difference between the two diseases, the consecutive progress in paralysis, I will write more at length later, for to my mind it constitutes an essential point.

In the third place, the croup is a disease which is almost exclusively confined to children, whereas the angine couenneuse attacks indiscriminately children, adolescents, and adults. You may say that this is a loose proposition. True, it cannot be proved by words to difference the nature of the two diseases, but it seems to me that mental discrimination must give the fact an important place in instituting a parallel between them.

I am about touching upon a ground, in my fourth proposition, which is so covered with eggs that I hardly dare cross it on tiptoe! You will appreciate my hesitation, if you remember certain of our conversations together while you were in Paris, when I whisper in your ear that word which is to my mind what *bile* is to the mind of the community at large—a scapegoat for the generality of Nature's medical mysteries, contagion. Knowing my sentiments fully upon this subject, you may be disposed to regard the few words I have to offer upon this point as more serious than you would if they came from a contagious sectarian; for you know that I don't believe that a medical *sectarian* can be a sound man, any more than I do that a *religious* sectarian can be a religious man. The croup occurs frequently sporadically, more frequently as an epidemic, but I think a few are disposed seriously to consider that it is ever propagated by mediate contagion. Diphtheria *rarely* occurs as a sporadic disease, almost invariably as an epidemic; and now, my dear doctor, I shut my eyes and make my profession of belief: if there exists a mediately *contagious* disease on earth it is the angine couenneuse, and that the epidemics of this disease are or may be contagious epidemics. I admit this belief, by no means losing sight of atmospheric influences, which are greater, in my opinion, than all others in the development and propagation of the disease, but simply to acknowledge that I believe it to be endowed with a highly contagious element. This is an opinion founded upon the fairest observation of which I am capable, and by no means a theoretical convenience.

My fifth proposition regards the mode of invasion of the two diseases. Membranous croup commences insidiously, and ordinarily several days elapse before the symptoms awaken serious apprehensions in the minds of those who surround the patient. The angine couenneuse, on the other hand, enters upon the field with a certain conquering magistry, as a general rule, which leaves no time for parley. The first symptoms are ordinarily, with the exception of the soreness of the throat, those which announce an invasion of typhoid fever, general lassitude (the patient expresses it better than I can in classical professional language by informing you that he feels sick all over), to which are added pains in the head, back and limbs, accompanied by a febrile movement for the most part quite intense. The disease carries the typhoid type with it, if you will permit me the expression, throughout its entire course, and, if possible, this element is more marked during the convalescence, which is always an affair of several months, than during the acute period of the disease. In your letter to me, announcing your sad affliction for the death of your dear boy from this disease, you made a remark which proved to me again your high medical sagacity, for you had seen but two or three cases as yet in New Orleans from which to form your opinion. It was, that you considered it to be "evidently as general and as much a blood poison as the New England typhus." It is most certainly that, and it is *more*—it is deeper and more deadly.

With regard to the treatment of this terrible malady, my views are, to a certain extent, in accordance with those generally professed to-day. It is of an absolute necessity, in my opinion, to apply a mixed treatment, general and local, from the commencement. I would much sooner abandon the latter—surgical treatment—as a means of prolonging life and giving a larger trial of general treatment excepted than the former. It is evidently a typhoid disease, and as such must be treated from the start—it is a septic disease, and as such must be combatted at the earliest moment; it is accompanied by local accidents, and they must be treated as they present themselves. First, then, I advise at my first visit an insufflation of a drachm of very dry powdered burnt alum, whether I find a commencement of the plastic deposit on the tonsils or in the pharynx, or not—you will always find the fauces and tonsils inflamed, and ordinarily a commencement of the deposit in some locality in the throat. Even if I find it already considerable, my treatment is the same. At the same visit I also advise a tepid bath, of an hours' duration at least, and more frequently of two hours, and a purge of citrate of magnesia (purgative lemonade), six or eight drachms in solution, and dose to be repeated every two hours until it operates. This is to prepare the patient for what is to follow, by cleaning the intestines of whatever load of matter they may contain, activating the secretions of the entire canal, and irritating the absorbents, if I may so speak, to a more rapid action upon the general medication to follow. The bath is of eminent service in revivifying the powers of that immense organ, the skin, and activating its functions. I can't pretend to explain how, but you will see and feel it as clearly as myself. I prefer the alum as a topic most decidedly to nitrate of silver, as it forms no eschar to blind you at your next visit with regard to the exact state of things in the throat, and also because I have found it really more potent in its good influence as a local application. The tongue is to be held down with a large spoon, and the alum blown in through a single glass tube, six or eight inches long, and one-fourth of an inch in diameter, at the moment when the presence of the spoon in the fauces causes the involuntary act of gagging on the part of the patient. This insufflation I order to be continued every hour until my return. Its frequency must always be determined, however, by the sagacity of the physician, the gravity of appearances taken into consideration. I rarely order it less often than once in two hours. Having thus prepared my patient, I commence immediately upon my general treatment, which consists in the administration, every three hours, of ten grains of the chlorate of potash, and ten grains of the bichlorate, dissolved in some convenient vehicle, with the administration ordinarily with one-tenth of a grain of calomel in sugar, dry, upon the tongue, every hour or every two hours, stopping and recommencing its administration according to circumstances, which can only be explained or appreciated by the physician at the bedside. This is a proper moment to lay before your consideration a question which has been recently agitated in the medical world, viz: if in the simultaneous administration of calomel and the chlorate of potash, the effects of the latter do not counteract in a measure, or destroy entirely, the specific effects of the former? For my own part, I am prepared to say that although it may retard or prevent, for aught I know, the specific effects on the salivary glands, I do not believe that it modifies, in any way, its effects upon the secretions. This opinion is based upon many, and some very recent observations. However, as we know nothing positively about the matter, I generally suspend the one and the other alternately for twenty-four or thirty-six hours at a time during the course of the disease, in order to profit, if possible, by the doubt. I always remove with long forceps, or by scraping, or by any other means, violent or gentle, all accessible portions of the pseudo-membranous deposit, in order to allow the topics to act as directly as possible upon the secretory surfaces, and also to prevent as much as may be the accumulation of a thick, hard deposit, which would act as a serious mechanical obstruction.

[TO BE CONCLUDED IN NEXT NUMBER.]

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OXYTOXIC.—The administration of the Indian hemp seems markedly and directly to increase parturient action, and Dr. Churchill states that it possesses power similar to those of the ergot of rye in arresting hemorrhage, when dependent upon congested states of the impregnated uterus.—*Braithwaite's Retrospect.*

Veratrum Viride and Chlorine in Yellow Fever.

[Our valued friend and *confrere*, Dr. E. D. Fenner, of the New Orleans School of Medicine, left for Europe on the 14th of May. On board the steamer which bore him hence, it will be seen that his mind still dwelt on home and its medical interests, and he has furnished the following letter to Dr. Brickell, which will be read by all who know him:—]

My Dear Colleague:—As some practitioner may desire to try the new treatment for yellow fever which I brought to the notice of the profession in the October and November numbers of our Journal last year, I have concluded, before quitting the country, to leave you some plain directions for carrying out the same.

I repeat what has been said before, that I think we have in the veratrum viride and chlorine mixture, medicines which are fairly entitled to be *considered remedies for yellow fever.* They will at least fulfill the following indications, viz: *completely control febrile excitement, and keep up the secretions of the liver, kidneys and skin.* Now, these are not *all* the indications that are presented in yellow fever, but they certainly are the principal ones, and those to which our remedies are chiefly directed. If the febrile excitement be very moderate, the V. V. will hardly be called for.

My directions, in brief, are as follows:—

At the commencement of the attack, order a hot mustard foot-bath, and evacuate the bowels with a mild cathartic, such as castor oil, citrate of magnesia, or Seidlitz powders. If the stomach be irritable, with bilious vomiting and a coated tongue, give a gentle emetic of ipecac, or salt and mustard.

After this, if the fever be high, give five drops of the V. V. in a little water, every four hours, till the pulse be brought down to seventy, when the V. V. will be stopped, or the interval between the doses prolonged, so as to keep the pulse at seventy. At the same time begin with the chlorine mixture, and give two tablespoonsful every four hours—thus V. V. at 2, chlorine at 6; V. V. at 8, chlorine at 10 o'clock, &c. If the fever be moderate from the first, the V. V. may be dispensed with, and the chlorine alone relied on, and given more frequently, say every second hour. These doses are for adults. Children, even sucking infants, bear the chlorine well, but the V. V. should be very cautiously given to them.

The repetition of foot-baths, sinapisms, spongings, enemata, &c., must be left to the judgment of the practitioner. I have no doubt that quinine, in some way, would be a valuable adjunct to these remedies; but will not direct it at present.

The following is the chlorine mixture:—

℞.—Acid. hydrochloric,
Aqua distallata,............................*aa.* ℥ ii.
Mix, and add
Potass. chlorat.,.............................. ʒ ii.

Let this be labelled and kept on hand. For use, prescribe as follows:—

℞.—Chlorine mixture,............................ ʒ ii.
Aqua distallat,.................................o. j. M.

S. Give two tablespoonsful every two or four hours (*pro re mata*).

For drink, I like orange leaf tea, lemonade and barley water. Covering: generally one blanket. Do not rise up in bed after the first day, until fairly convalescent.

With these two remedies as my main dependence, in twenty-five cases of the bad epidemic last year I only lost two—one a lady, who was delivered at the critical stage of the fever; the other a very delicate lady with no recuperative energy.

Dr. W. E. Kennedy told me he treated fifteen cases with these remedies, and lost but one.

Dr. C. Beard treated eight cases, and lost none.

Dr. S. Choppin treated eight cases, and lost none.

Other physicians told me they had tried these remedies, with happy effects. I hope others will try them, if yellow fever should again appear in any of our cities or villages.—*Southern Medical Journal.*

Tincture of Capsicum for Chilblains and Toothache.

By Dr. A. Turnbull.

My plan of treatment is simply to saturate a piece of sponge or flannel with the concentrated tincture of capsicum, and to rub well over the seat of the chilblains, until such times as a strong tingling and electrical (?) feeling is produced.

This medicine possesses an extraordinary power in removing congestion by its action upon the nerves and circulation.

This application ought to be continued daily until the disease is removed. Relief will be experienced on the very first application, and frequently there will be a total removal of the disease after the second or third. This, of course, depends upon the severity of the case. This embrocation when rubbed never produces excoriation, if the skin is not broken.

The manner of using it for toothache is by putting a drop or two of the tincture on cotton, and applying it to the part affected, the relief will be immediate. The following is the formula:—

℞.—Tinctura capsici concentrata.
Capsici baccarum,.......................... ℥ iv.
Spiritus vini rect.,........................ ℥ xij.
Macera per dies septem et cola.

It may also be made with advantage by displacement.—*Medical Gazette.*

Editorial.

Proceedings of the American Pharmaceutical Association, at the Eighth Annual Meeting, held in Boston September, 1859.—We have just received this volume, containing over four hundred pages of closely printed matter. The style, general appearance, and execution of the work reflects much credit upon the Committee having this duty in charge.

As very truthfully stated in the prefatory note, the amount of matter it contains, if printed like the reports of many Associations, it would make a volume of 1,000 pages.

There is scarcely a report or essay in the entire volume which is not of such a practical character as to make it valuable as well as interesting to every member of the medical profession—subjects upon which they should be well informed; and we are quite sure they cannot do so at less cost than the Committee offer this work, in handsome library style.

The reports of the Committees
On the Progress of Pharmacy,
On Weights and Measures,
On the Revision of the Pharmacopœia, and
On Home Adulterations,
are very full and valuable; that on weights and measures, upon which much discussion has occurred, is very full, and will amply repay a perusal.

Among the special and volunteer reports on scientific subjects and essays are many valuable scientific papers, evincing much interest on the part of apothecaries in the general objects and aims of the Association. To these we shall refer more particularly at another time.

Those wishing to procure the work can address the President, S. M. Colcord, or Charles T. Carney, Boston, inclosing *one dollar for the book and twenty-five cents for postage*, who will forward the same by mail.

Scarlatina.—In reply to several letters inquiring what preparation of ammonia was used by Mr. Witt, we state, that the article in *Braithwaite's Retrospect*, vol. 38, page 17, is not clear. We should infer that the sesqui carbonate was used, as Dr. Rogers, in the London *Lancet*, of the reprint of June last, refers to that article as recommended by Mr. Witt, and states that his experience does not agree with Mr. Witt. The hydro-chlorate has also been tried in cases of scarlatina, with varied success, depending upon a variety of coincidents.

Dr. McGugin, of Iowa, in referring to the use of ammonia in this disease, says that instead of it he has used, in an epidemic of scarlatina, during the present winter, chlorate of potassa, in combination with veratrum viride; it was of the anginose variety, and every case was controlled in a few days. He gave the veratrum with the solution of chlorate, each in doses appropriate to the age of the patient, using the salt as a gargle.

Dr. Bostwick mentions a number of cases attended with high fever, and pulse 120 to 140; some of them delirious on his first attendance. He treated all with veratrum and tonics, also applied sinapisms to the throat. In some attended with cough and excessive secretion of mucous, he vomited the patient by one or two additional drops, with great relief.

In several cases of this disease, which the writer has treated within a few weeks, all successfully, without witnessing one unfavorable sequence, he has relied mainly upon *veratrum*, *quinine*, *citrate of iron*, *brandy or whiskey*, *nitrate of silver*, *and chlorate of potassa.*

In one patient the disease was ushered in by alarming symptoms—great exhaustion of the vital energies, constant nausea and frequent vomiting, occasional lipothymy and spasms of the muscular system, with difficult respiration; pulse scarcely perceptible. Stimulants were immediately given in liberal doses—quinine, in two-grain doses, every three hours; citrate of iron, in two-grain doses: intermediate each dose of quinine; whiskey was given every thirty minutes, and the patient allowed the free use of ice. At first, to secure a free movement of the bowels, and keep up the renal secretions, extract of colchicum was given, in half-grain doses, every two hours, and continued until the object for which it was given was fully accomplished, and then discontinued entirely. No other cathartic medicine was given during the disease, the bowels, if necessary, being moved by enemas. Solution of nitrate of silver in crystals, ten grains to the ounce, was applied to the throat, night and morning, for four or five days; after which gargles of tannin and chlorate of potash, &c., were used. Inhalations of ether and tannic acid were used the first few days, with much relief.

It was necessary to continue the *quinine*, *iron* and *whiskey*, giving at proper intervals *iodide of potassium* during the first ten days, after which discontinued the *iron* and *potassa*, and continued the *quinine*, in one-grain doses, once in four hours, and *whiskey* every hour. This was kept up until the fifteenth day, and then gradually discontinued. Allowed the patient all the nourishment that the stomach would retain. I ought to have stated that during the first eight or ten days of the attack the patient was quite unconscious. A course of treatment less stimulating, or by abandoning early the quinine and iron, I am well satisfied would have been death to the patient. The case is peculiarly interesting, as it required for so long a time the frequent doses of stimulants and tonics.

The pulse on the second day was 120, when veratrum was given, two to four drops, every three to four hours, to reduce and keep the pulse between eighty and eighty-five, with the desired effect.

Drs. Babbington and Hughes, after long experience, were convinced that when the brain symptoms, which are so generally fatal, supervene during the convalescence of scarlet fever, there is no remedy more efficacious than colchicum.

As the brain symptoms arise from the retention of urates in the blood, it occurred to me that, by giving it in the early stages of the disease, to prevent the supervention of urema, the unpleasant sequences are avoided.

Prof. Bennett, of Edinburgh, thus recites his experience in the use of colchicum :—

"This was a very severe case of scarlatina. The angina was intense, occasionally rendering deglutition impossible. There was delirium on the third day, alternating at night with coma, which was often profound. The worst result was apprehended. It recurred to me that the head symptoms in this, as in several cases of typhus, might probably depend not so much upon inflammation of the brain, as is generally supposed, as upon the absorption of and poisoning by urea, an idea that appeared to me supported by the diminished quantity of the renal excretion, as well as its freedom from all deposit. Remembering the alleged virtues of colchicum in increasing the elimination of this excretion, I ordered it, in combination with diuretics, and the result was remarkable; for, on the next day, not only had the fever diminished, but the urine was increased in amount, and loaded with urates, to an extent and in form I had never previously seen. It may be argued that the fever had terminated by a natural crisis on the seventh day; but I cannot help thinking that in this case nature was assisted by the colchicum and diuretics. At all events, this medicine seems to me worthy of more extensive trial in scarlatina accompanied by dimunition of urine and head symptoms." J. B.

HYDROCYANATE OF IRON IN EPILEPSY.—We have received the following letter from Dr. Bailey, of Iowa, which we publish with pleasure, as it relates to the recovery of a case of long standing, and one regarded as hopeless. Dr. Bailey is a retired physician, and one of the most substantial men of that State, having held several important offices under the General Government, and now represents his district in the Senate of Iowa. It is now fourteen months since his son has had a paroxysm :—

VERNON, IOWA, *January.*

Messrs. Editors :—Observing in your excellent Journal many inquiries in relation to the success in the use of the hydrocyanate of iron, I have to state that in the hands of Prof. D. L. McGugin, of Keokuk, in this State, not less distinguished at home as a philanthropist than throughout the country as an eminent physician, I deem it a duty I owe to suffering humanity to give a statement of a case in my own family—*an only son*—in which he has effected an entire cure, by the use of that medicine, in that terrible of all diseases, epilepsy, after a standing of more than seven years. My son, for the above length of time, had convulsions, at intervals of from three weeks to two months, with such severity as materially to impair his memory. In fact, I had but little hope that he could be saved from the ordinary consequence of that disease—loss of reason.

Every remedy was employed that medical skill could suggest for more than six years, without success; but finally, after laborious and patient research by the Professor, the hydrocyanate of iron was obtained, (I believe at your hands.) About four weeks after he gave it to my son, he had a very light paroxysm of the disease, and since that time, now fourteen months, he has not had the slightest symptom; is now as well as he was at any time prior to the first attack, and is performing the duties of postmaster at this place, beside acting as clerk in a store.

I hope that the Professor may deem it his duty to the profession, and to humanity, to give a detailed statement of this case to the medical public, that others may be induced to make trial of the remedy; and it is for this object and purpose, viz: to urge medical men to a trial of this drug, that I now report this case, and trust that in *every* case it may prove as fortunate as in my own family. I cannot close this communication without saying that no one can properly appreciate the deep sense of obligation my family feels to the Professor for his instrumentality in effecting this remarkable cure, unless it be a parent, a sister, or a brother to a patient similarly afflicted. In fact, a house of gloom and mourning has been happily changed to one of joy and happiness.

I am proud that medical science can furnish such trophies of its power to heal, and in this instance

I have chosen to express a double gratification, as a medical man—though retired from the active duties of the profession—and the joy of a parent, in the recovery of a son whom I once mourned as being beyond the reach of remedy and the power of the best medical skill.

Most respectfully, yours, &c., GEO. S. BAILEY.

TANNATE OF BISMUTH.—The *Bulletin de l'Academié de Médicine* contains a communication of Dr. Cap to the Academy of Medicine of Paris, in which he calls their attention to a new product, *tannate of bismuth*, for chronic diarrhœa, &c. The idea was suggested by the analogous and valuable properties of both—the one a pure astringent; the other possessing tonic properties, and a highly soothing influence upon irritated mucous surfaces, or when in a state of chronic inflammation, has been found highly valuable in dyspepsia, chronic gastrites, heartburn, diarrhœa, &c. A consideration of the medical properties of both readily suggest the value the combination may possess; it is stated to be without taste, and pleasantly administered.

Several cases of diarrhœa are stated in which the disease yielded with doses of two to four grammes, and twelve other cases where it was administered by other physicians in like doses. Cure was generally effected in two days. We shall give a full translation of this article, and whatever else may be published in the foreign journals, as we cannot but regard this as of equal, if not more value than other combinations, either of tannin or bismuth.

DIPHTHERIA.—We devote more space to the discussions in the New York and Cincinnati Academies of Medicine upon this epidemic than we usually give to a single subject, because our numerous correspondents have requested the latest information concerning its treatment. With a view of fully meeting this inquiry, we also publish the letter of Dr. Bigelow, of Paris, to Prof. Warren Stone, of the University of Louisiana, published in the January number of the New Orleans *Medical and Surgical Journal*, with the following note from Dr. Stone:—

> DR. DOWLER: *Dear Sir*—The accompanying communication, on the subject of diphtheria, from Dr. Bigelow, of Paris, was kindly furnished at my request. When in Paris, a year ago, I had some conversation with the Doctor on the subject, and finding the disease in our city on my return, I wrote to Dr. Bigelow, and requested as a favor his experience in this destructive malady. No better authority could be appealed to; for he is an American, and received an American practical education, and then resorted to Paris to perfect himself, where he has settled in full practice and intimate relation with the leading members of the profession. I trust you will find it a valuable contribution.
>
> Yours, very truly, WARREN STONE, M. D.

BRAITHWAITE'S RETROSPECT OF PRACTICAL MEDICINE AND SURGERY.—The volume for January is just out, and may be had by addressing W. A. Townsend & Co., 46 Walker street, New York, and inclosing one dollar. It gives a condensed, well-written digest of most of the medical periodicals of Europe and America, and is one of the most valuable publications of the day. It has been in existence nearly a quarter of a century, and in a physician's library, as a work of reference, it may be said there are few superior to it.

FLUID EXTRACTS.—We are obliged to omit a communication considering the relative value of these preparations, with tinctures, &c., which we shall give in next number, as well as several other articles unavoidably deferred.

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Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER III.

We propose to treat of our indigenous vegetable tonics under the following heads, viz:—

I. Simple or pure bitters.
II. Bitter tonics, combining demulcent properties.
III. Bitter tonics, with stimulant and diaphoretic properties.
IV. Bitter tonics, with alterative properties.
V. Bitter tonics, with laxative and deobstruent properties.
VI. Bitter tonics, with sedative properties.

I.—PURE AND SIMPLE BITTER TONICS.

GENTIANA.

(*Pentandria—Digynia—Natural Order—Gentiana, &c.*)

The natural order Gentianaceæ embraces several of our most valuable simple bitters, such as the American centaury, American colombo, gentian, the buck-bean, &c. All the plants belonging to it are smooth herbs, with a colorless, bitter juice; opposite and sessile, entire and simple leaves; regular flowers, solitary or cymose, with the stamens as many as the lobes of the corolla, which is monopetalous, with persistent calyx; the stamens inserted on its tube. Of the nine genera belonging to it, in the Northern and Middle States, all have valuable bitter tonic properties. Species belonging to this genus are very widely disseminated over the globe, and are everywhere employed as stomachic and bitter tonics. The bitter principle resides in the roots in some genera, and in the stalks and leaves of others. . Griffith states that they may be employed indifferently.

The genus *Gentiana* includes more than one hundred and fifty species, the greater part of which are found in temperate and cold climates, of which about twelve species are common to the United States—all endowed with similar sensible properties. Of these, the quinqueflora, crinita, and saponaria (*catesbaei*—Walter) are best known, and more generally employed. Analysis shows that their organic constituents are nearly identical. The *G. lutea* (yellow gentian), which is often found in hilly lands in this State and New Jersey, has doubtless been introduced from abroad. The *G. saponaria* (soapwort gentian) is a very beautiful plant, from twelve to eighteen inches high, with large, bright blue flowers, which appear in September and October; it is found from British America to the Carolinas, and is one of our most reliable species. The *G. crinita* (blue-fringed gentian) is also one of our most useful and interesting native plants; it is common in cool, low grounds, from Canada to Georgia. The stem is about one foot high, round and smooth. The *G. quinqueflora* (five-flowered gentian) is confined chiefly to our Western States. Three of our native species are annual, the others perennial. The sensible properties of the roots of all our native species are so similar to those of the officinal foreign species (*G. lutea*) as scarcely to be distinguished from it. This genus presents the singular anomaly, that while some of the species have five stamens and a five-cleft corolla, others have but four stamens and a four-cleft corolla, and others still a different number. Considerable confusion exists in regard to the names of the different species of gentian. For example, the *G. catesbaei* of Elliot and Bigelow, and which was first figured and described by Catesby, is the *G. puberula* of Michaux, Torrey and Gray; while the *G. saponaria* of the latter is the *G. catesbaei* of Walter. So, also, the *G. alba* of Muhl. and Gray is the *ochroleuca* of Sims, Darlington, &c. It may be well to recollect that the stem of the *G. saponaria* is smooth, while that of the *G. puberula* (*catesbaei*) is rough.

Chemical Composition and Sensible Properties.—Your recent analysis of the root of the *G. catesbaei* of Bigelow gives, bf—

Organic Matters,	94.00
Inorganic "	6.00
Total,	100.00
Gum,	3.220
Albumen,	2.338
Starch,	1.938
Extractive,	3.019
Bitter Principle,	11.746
Sugar,	3.156
Coloring Matter,	14.088
Resins,	4.000
Bird Lime,	1.206
Soluble Salts,	1.094
Insoluble Salts,	4.708
Lignin,	49.447
Total,	100.000

It thus appears that the principal organic constituents are: gum, albumen, starch, bitter principle, sugar, coloring matter and resin. The sugar is of the crystallizable kind. The foreign species yields a concrete oil, and a crystalline substance, *gentisin*, which is described by some writers as gentisic acid. This is not the active principle, however, as was supposed by Henri and Caventou; for when free from impurities the crystals possess no bitterness, are colorless, feebly soluble in water, alcohol and ether, and very feebly acid in relation to vegetable colors and bases. Christison supposes that the active principle has not been isolated, but it evidently resides in the bitter extractive matter. Every species of gentian readily imparts its bitterness to water, cold or hot, to alcohol, diluted spirit, wine and sulphuric ether. The root has at first a mucilaginous and sweetish taste, which is speedily succeeded by an intense bitter. That water is a good solvent is proved by the fact that the infusion is as bitter as the tincture. No astringency is found in any of the species. What has been called *gentianin* seems to be a compound of the bitter principle, *gentianite*, and gentisin the crystalline and tasteless substance, as pointed out by Tromsdorff and Leconte.[*]

Neither the salts of iron, nor the nitrate of silver, throw down precipitates in the infusion; the acetate of lead and the decoction of yellow cinchona bark, however, cause copious precipitates. Acids greatly diminish the bitterness of gentian, while alkalies increase the bitterness. Owing to the starch and sugar the infusion soon ferments and spoils.

Therapeutical Properties and Uses.—Gentian has been employed in medicine from a very remote antiquity, deriving its name, as is supposed, from Gentius, king of Illyria, who lived 167 years before the Christian era. It formed a part of the celebrated antidote of Mithridates, which was believed to protect the person taking it against all poisons whatever. But most of its imputed virtues were fabulous, such as its efficacy against poisons, the bites of the mad dog and venomous serpents, and its powers as an attenuant, deobstruent and diuretic.

Our native species of gentian possess similar properties to the foreign (*G. lutea*), which is in general use. In some parts of our country, particularly the Southern States, the blue gentian is very extensively substituted for the foreign article. It goes under the name of *Sampson's snake-root*, and is used in pneumonia with typhoid symptoms, and dyspepsia, and also as a stomachic tonic. There is no doubt that its medicinal virtues are fully equal to those of the European gentian. As a pure and simple bitter, gentian ranks next to quassia in its power of exciting the appetite and invigorating the powers of digestion. Given in health, it quickens the circulation and increases the temperature of the body. In morbid conditions, to which it is adapted, as dyspepsia and other gastric affections, attended with torpor and debility, unaccompanied by irritation or inflammation, or inordinate susceptibility, it proves of eminent service, especially in combination with carbonate of ammonia. As a general tonic, also, in cases of feebleness and debility of the whole system, especially of the muscles, not dependent on organic disease, it is very beneficial. In intermittents, also, of a moderate grade, gentian, in combination with small quantities of tannin, will arrest the paroxysms, with considerable certainty. Cullen states that he never found it to fail in such cases, when combined with an equal quantity of galls and tormentil. We have used it with great advantage in some cases of atonic gout where there was considerable general debility, unattended with fever or gastro-intestinal irritation: also in hysteria and chronic menorrhagia under similar circumstances. Like all other bitter tonics, however, it will oppress and disturb the stomach in doses too large, causing nausea and vomiting, and acting as a cathartic by irritating the mucous membrane of the bowels. But in suitable doses, no such effects will follow. In amenorrhoea and chlorosis, it forms a very admirable remedy in combination with iron, especially in those chronic cases attended with symptoms of anæmia and debility of the digestive organs. In scrofulous affections, also, it is used with much benefit, especially in connection with chalybeate preparations or Lugol's solution of iodine. In prescribing it, however, as in all other cases, the name of the disease is of less importance than the general condition of the system, particularly of the digestive organs. In verminous affections it has long been celebrated, both as a prophylactic and a positive antidote. From the fact that quassia and colombo have been found to exert a specific effect on the cerebro-spinal system, and to possess narcotic properties, it has been surmised that gentian also might be found to have similar qualities. The experiments of Majendie[*] and Hartl,[†] however, to decide this point, must be regarded as unsatisfactory, inasmuch as the narcotic principle, if it exist, may be, and probably is, of a volatile nature, and the preparations they used were made with boiling water. Now, it has been satisfactorily ascertained that the distilled water of gentian produces speedy intoxication, as well as violent nausea; and various writers, as Buckner, speak of the narcotic effect produced by gentian root, when no foreign substance could be detected in it. Pareira remarks that "facts support the opinion of Haller that gentian is not so innocuous as is supposed"* There is, however, no satisfactory evidence that any species of gentian is endowed with sufficient narcotic power as to interfere with its proper use as a tonic, or to render it in any marked degree injurious as a toxic agent. We believe that the poisonous effects mentioned by some writers, as in the *Phil. Transactions* for 1748, were caused probably by the roots of some other plants which accidentally got mixed with those of the gentian.

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[*] A few years ago a substance was imported under the name of *gentianine*, which was said to be the active principle of the gentian root of commerce. It was slightly soluble in cold water, but readily dissolved in boiling water; was yellow, inodorous, and possessed in a high degree the aromatic bitter taste of gentian. It was of a dark brown color, and was no doubt a very impure extract, containing sugar, gum, coloring matter, and the bitter principle. Dr. Carpenter, of Philadelphia, recommends the following process for the purpose of obtaining the pure bitter principle, which he also calls *gentianine*:—Digest the powder of gentian in cold ether, by which a strong green tincture is obtained; filter and pour into an open vessel, and, if sufficiently concentrated, a yellow crystalline mass will be deposited. Treat this with alcohol, filter and exposed to heat, the yellow crystalline substance appears, assuming at the close of the evaporation a solid mass, extremely bitter; treat this again with alcohol, evaporate to dryness, wash the residuum in water, adding a little calcined and well-washed magnesia, boil and evaporate in a water bath, and the bitter principle remains partly free and partly in a state of combination with magnesia, to which it imparts a yellow color. This is then to be boiled in ether and evaporated, and the bitter principle is isolated and comparatively pure. A *tincture* may be made by adding five grains of this extract to an ounce of alcohol, and is a perfect substitute for the officinal tincture of the root; a *syrup* also can be prepared by adding sixteen grains of it to one pound simple syrup.

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[*] Formul., p. 318, 8me. edit.

[†] Wirk. d. Arzneim. u. Gifte, bd. ii., s. 309.

In regard to the question whether gentian can be used for a long time without injurious effects, by exhausting the vital energies, the law holds good, as it does in regard to all tonic agents, that its protracted use is not without more or less hazard. Though Prof. Tully states that this is not true of mere and pure tonics, yet our observation leads to a different conclusion. Of course, much will depend on the quantity used. But that any tonic whatever can be given, not only with impunity, but with benefit, for twelve and even twenty years, as stated by this author, is opposed to known physiological laws, as well as established general experienee. There may be exceptional cases, as in persons of a strumous habit, who labor habitually under debility of the digestive organs, where the constitution may need and be benefited by the moderate and habitual use of both tonics and stimulants, and especially where the temperament is phlegmatic. Thus the infusion of the *hop* is taken habitually by many in the form of malt liquors, and apparently without injury; this plant tending to diminish the injurious effects of such drinks, not only by counteracting the indirect debility which they might otherwise occasion, but rendering them, when taken in moderation, acceptable to the stomach and promoters of digestion. Nothing, however, can be more hazardous than the constant habit of taking stomachic bitters, such as Stoughton's and other compounds, into which gentian largely enters, to promote a healthy appetite. The custom of infusing bitter herbs in vinous drinks, as remarked by Paris, is very ancient and universal, and the *poculum absinthiatum* appears to have been regarded in remote ages as a wholesome beverage, the wormwood being supposed to act as an antidote to drunkenness. The Swiss peasant, says this writer, cheers himself amid the frigid solitude of his glaciers with a spirit distilled from gentian, the extreme bitterness of which is relished with a glee which is quite unintelligible to a more cultivated taste, and perhaps less acceptable to a stomach accustomed to more nutritive and digestible aliments. Whoever should infer from such instances that bitters are necessary in the ordinary state of health, or that they can habitually be used with safety, would draw a very erroneous conclusion. Granting that bitter extractive is essential to healthy digestion in herbiverous animals, acting as a natural stimulus to their organs, it by no means follows that it is equally necessary for the human subject. It is a well-known fact, and one which has an important bearing upon this subject, that the habitual use of the celebrated Portland powder in cases of gout almost invariably led to a fatal result in the course of two years. This was composed of equal quantities of the powdered roots of gentian, birthwort, germander, ground pine, and lesser centaury.*

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* Mat. Med., vol. ii., p. 526.

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* No modern writer has written with more judgment and discrimination on tonics than Dr. Cullen. His theoretical views may not always be in accordance with sound pathology, but his statement of facts is always to be depended on. He remarks that "bitters actually destroy the tone of the stomach. I dare not determine," he continues, "whether the loss of tone mentioned is produced merely by the repetition of their tonic operation or by a narcotic quality which has been suspected in wormwood and other bitters, and which appears pretty strongly from the poisonous quality that is found in the strongest bitter we are acquainted with—that is, the Faba St. Ignatii. I am truly of opinion that somewhat deleterious property in the whole of the bitters is to be expected." (*Mat. Med.*, vol. ii., p. 64.) Speaking of the Portland powder, in cases of gout, he observes:—"I have had occasion to know, or to be exactly informed, of the fate of nine or ten persons who had taken this medicine for the time prescribed, which is two years. These persons had been liable for some years to have a fit of a regular or very painful inflammatory gout once, at least, and frequently twice, in the course of a year; but after they had taken the medicine for some time they were quite free from any fit of inflammatory gout, and, particularly when they had completed the course prescribed, had never a regular fit, or any inflammation of the extremities to the rest of their lives. In no instance, however, that I have known was the health of these persons tolerably entire. Soon after finishing the course of this medicine they became valetudinary in different shapes, and particularly were very much affected with dyspeptic and what are called nervous complaints, with lowness of spirits. In every one of them, before a year had passed after finishing the course of the powders, some hydropic symptoms appeared, which gradually increasing in the form of an ascites, or hydrothorax, especially the latter, joined with anasarca, in less than two, or at most three, years proved fatal. These accidents, happening to persons of some rank, became very generally known in this country, and has prevented all such experiments since." (See, to the same purport, *Lond. Med. Observer*, i., art. 14; *Chir. Phar.*, p. 341; *Epist. Haller*, vol. v., p. 5; *Gaubius' Works of the Harlem Soc.*, vol. iv., &c.)

Preparations: Fluid and solid extracts, tincture, infusion, wine, and syrup.—The simple and compound fluid extracts are admirable preparations, and preferable to all others, except when the pillular form is desirable for purposes of combination, as with some of the metals. The tincture is readily made by adding four ounces of the fluid extract to one pint of diluted alcohol; also the syrup, by adding two ounces of the fluid extract to fourteen ounces of simple syrup. The solid extract should always be made by displacement with cold water and evaporation, and not by boiling, as heretofore. The U. S. P. directs that the filtered liquor should afterwards be heated, strained, and evaporated to the proper consistence. The compound infusion of gentian has sometimes been known to gelatinize by keeping.

COPTIS TRIFOLIA (*Gold Thread*).

Polyandria—Polyginia—Natural Order—Ranunculaceæ.

This beautiful little evergreen is found growing in sphagnous swamps and boggy woods, in the Northern parts of the United States, also in Iceland and Siberia. The natural order *Ranunculaceæ*, to which it belongs, includes several valuable medicinal plants, of, however, widely diversified properties, as helleborus, delphinium, aconitum, zanthorizâ, hydrastis, actaea, cimicifuga, hepatica, &c. Belonging to the polypetalous, exogenous plants, the order embraces herbs, or woody vines, with a colorless, acrid juice. Many of them are powerfully acrid-narcotic poisons, while some, as the coptis and hydrastis, are pure bitter tonics. The coptis is one of the few plants common to both hemispheres. It was named *helleborus trifolius* by Linneus, but afterwards called coptis by Salisbury, from a Greek work signifying *to cut*, from the shape of the leaves. The rhizomata, from which the name of *gold thread* is taken, are perennial, filiform, creeping, of a bright yellow color, running in every direction. The new stems are invested at the base with a number of yellowish, ovate, acuminate scales. The leaves are ternate, on long, slender petioles; the scape slender, round, bearing one small, starry white flower, and a minute bract at some distance below. The genus includes but one species in the United States.

Chemical Composition and Physical Characters.—The organic constituents of this plant have never been accurately ascertained till your recent elaborate analysis. Bigelow states that the constituent with which it most abounds is a bitter extractive matter, soluble both in water and alcohol; that it seems destitute of resinous or gummy portions, contains no astringent principle, but abounds in bitter extractive matter, which is precipitated by nitrate of silver and acetate of lead. Your analysis gives, of—

Organic Matters,	94.17
Inorganic "	5.83
Total,	100.00

Gum,	4.07
Albumen,	2.90
Starch,	1.34
Sugar,	5.82
Extractive,	3.48
Bitter Principle (yellow),	21.00
Oil,	6.75
Soluble Salts,	3.09
Insoluble Salts,	2.94
Lignin, &c.,	53.81
Total,	100.00

Therapeutical Properties and Uses.—The gold thread being a pure and powerful bitter, without the least astringency, and more palatable than most of the simple bitters, is well adapted to all cases in which this class of remedies is indicated. Destitute of resin, it imparts its virtues freely to water. It has obtained considerable reputation as a local application in apthous and other ulcerations of the mouth, and also as a gargle in throat affections. The tincture and fluid extract form a very elegant and useful stomachic in atonic forms of dyspepsia, and in convalescence from acute affections where the appetite remains deficient. It has been compared to quassia in its mode of action, but in general it proves more acceptable to the stomach. In bitterness it ranks between gentian and quassia.

Preparations: Substance, infusion, fluid extract, solid extract, tincture, and syrup.—The tincture may be made by macerating an ounce of root in a pint of diluted alcohol, of which one fluid drachm is a dose. The bitter extractive may be precipitated from the infusion or tincture by nitrate of silver or acetate of lead.

MENYANTHES TRIFOLIATA (*Buck Bean*).

Pentandria—Monogynia—Natural Order—Gentianaceæ.

This perennial plant, like the coptis, is a native both of Europe and North America, growing in swamps and boggy places, and on the margin of ponds. It rarely is met with south of the thirty-eight degree of latitude, or the northern boundary of Virginia. The plant, which is herbaceous, is from eight to twelve inches high, and arises from large, black perennial roots, descending deep into the boggy earth. The leaves, composed of three oval leaflets, are situated on long, round foot-stalks, stipuled at base; leaflets obovate; peduncle long, naked, terminal, bearing a pyramidal raceme of beautiful flesh-colored flowers. It flowers in May; all parts of the plant are medicinal, though the root only is officinal.

ORGANIC CONSTITUENTS.*

Organic Matter,	96.35
Inorganic "	3.65
Total,	100.00
Gum,	3.328
Albumen,	9.988
Starch,	0.089
Extract,	13.325
Sugar,	8.806
Coloring Matter,	17.092
Bitter Principle,	14.905
Chlorophylle,	2.400
Resin,	5.613
Soluble Salts,	0.889
Insoluble Salts,	2.701
Lignin, &c.,	20.804
Total,	100.000

The whole plant has a very bitter and somewhat nauseous taste: its bitterness equaling that of gentian. The bitterness resides in a peculiar bitter principle, to which the name *menyanthin* has been given; soluble in water and spirit. It may be readily obtained by treating the spirituous extract of the plant with hydrated oxide of lead, removing the lead by hydro-sulphuric acid, filtering and evaporating the liquor, exhausting the residue with alcohol, and again evaporating with a gentle heat. It is a neutral substance, having neither acid nor alkaline properties.*

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* Tilden's analysis.

Therapeutical Properties.—As a bitter tonic, the menyanthes has long been employed in medicine as a useful tonic, ranking in point of power with gentian and colombo. Although no tannin was detected in it in the analysis above given, yet, as its juice strikes a black color with the persalts of iron, it no doubt contains a small quantity. It is regarded by Cullen, and other writers, as a pure bitter, and Bigelow thinks it entitled to a high place in the list of tonics. Griffith states that in small doses it is tonic and astringent, but in larger doses cathartic and, sometimes, emetic. He regards it as analogous to gentian and centaury in its action, and useful in all cases to which they are applicable. It may be remarked, however, that all the pure bitter tonics are both emetic and cathartic, in large doses, and that there is little difference in this respect among them. These effects are more decided, perhaps, in the fresh than in the dried state. The dried powder of the root may be given in ten-grain doses, with the effect of imparting tone to the stomach and invigorating digestion; in doses of a scruple to a drachm it will often prove cathartic, and in a little larger dose emetic. In Bigelow's experiments, a drachm of the powdered root, or two or three gills of the saturated decoction, produced vomiting and purging, and frequently powerful diaphoresis. In these respects it closely resembles the eupatorium perfoliatum. It is more unpleasant to the taste; and this may be the reason why it is not so generally employed for these purposes as the latter plant. Formerly, it was supposed to possess valuable alterative properties, and hence extensively employed in cutaneous diseases, rheumatism, dropsy, scurvy, &c. Boerhaave states that he was cured of the gout by drinking the juice of the plant mixed with whey. As a remedy in intermittent and remittent fevers, it also had considerable reputation, possessing, as it does, sufficient power to break the paroxysms in mild cases. It was also formerly in use in Germany as a prophylactic against disease in general, and was regarded as a panacea.

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* According to Tromsdorff, the expressed juice of menyanthes contains a very bitter extractive substance, containing nitrogen, a brown gum, some inulin, a green fecula, some malate and acetate of potassa, and seventy-five per cent of water.

It is still used in some parts of Europe as a substitute for hops in brewing, and is even mixed in bread by the Laplanders. Our own experience in the use of this plant satisfies us that it is one of our most valuable simple bitters, very analogous in its effects to gentian, to which it is so closely related in its botanical habit. Its uses are the same as those of the other articles of the same class.

Preparations: Powder, infusion, fluid and solid extract, tincture, and syrup.—The dose of the powder is from ten to twenty grains; the infusion is made with half an ounce of the dried root to a pint of boiling water, the dose of which is an ounce. The dose of the fluid extract is from half a drachm to two drachms; of the solid extract, ten grains—and these may be repeated as usual three times in twenty-four hours. The root is to be gathered in the fall or spring of the year, and carefully dried and kept secluded from the air and light. The same rule is to be observed in regard to all vegetables used as medicines.

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Therapeutical Properties of Gelseminum.

BY A. F. PATTEE, M. D., OF WEST AMESBURY, MASS.

THE Gelseminum Sempervirens, or yellow jessamine, grows wild in the Southern States. For further particulars of its botanical history the reader is referred to the various works upon botany. This medicine was introduced to the notice of the profession by a Southern planter, who employed it in fevers, he having used it with marked success on his own person and others.

Active Principle of Gelseminum.—The virtues of Gelseminum reside chiefly, if not exclusively, in a peculiar organic principle called *gelseminin*, which is said to satisfy all the indications of the plant.

Effects Upon the System.—Numerous articles have been published on the subject of Gelseminum within the past three years, throwing much light upon its physiological and therapeutical action. From the results of recent observations and experiments, I am disposed to think that it can well rank as a direct sedative to the nervous system, and secondarily to the circulation, while it occasionally acts as a diaphoretic and diuretic. Applied to the skin, it first occasions a slight feeling of heat, which is soon followed by a little numbness; when taken into the mouth, in a concentrated form, it often occasions dryness of the mouth and fauces; when applied to the eye it causes dilatation of the pupil, an effect which I have witnessed upon myself and others. Given internally, in small doses, repeated two or three times daily, so as to bring the system gradually under its influence, the first effect usually noticed is an agreeable and diffusive feeling of comfort, followed, perhaps, by slight vertigo, or other uneasy sensations in the head, and a slight reduction of the pulse. From larger quantities the effects are more quickly induced, and are more severe. If more frequently repeated, giddiness, dimness of vision, dilated pupil, general muscular weakness, and a feeling of inability to move or speak, takes place, with syncope in many cases. The pulse is reduced fifteen or twenty strokes per minute, and the respiration accordingly, with a general condition of muscular and nervous prostration, which may continue for hours or even days. This condition, however, soon passes off by giving from one to five grains of quinine with a teaspoonful of wine, every three hours, or from ten to twenty drops tincture of opii every four hours, leaving the patient in a gentle perspiration, with a feeling of comfort and ease.

A peculiarity in the operation of Gelseminum is, that while it diminishes both general and special sensibility, consciousness is usually in no degree impaired. No nausea or vomiting is ever occasioned by the medicine. As to narcotic properties, which have been ascribed to it by many, I have not been able to distinguish any effect upon the system that would lead me to conclude that it had any peculiar action but what could be attributed to its other properties. Carbonate of ammonia, opium, quinine, iodine and brandy, are antidotes for an overdose, which may be given as occasion may require.

Therapeutic Application.—The general indications to which Gelseminum is suited, through its sedative properties, to fulfill, is to reduce morbid excitement of the nervous and circulatory systems. Hence it will be found useful as an anodyne, antispasmodic and antiphlogistic remedy. In all cases of acute inflammation, especially when attended with fever, Gelseminum may be advantageously used; but it is in *fevers* and *pectoral affections* in which it has enjoyed the most reputation. In all the *idiopathic fevers*, with a sthenic or asthenic state of the system, Gelseminum is very useful, by diminishing the febrile symptoms, promoting secretions, especially of the skin, and quieting nervous excitement.

Dr. Nash says:—"I have used the article in every case of idiopathic fever that has fallen under my treatment within the last six months, with perfect impunity, and with the most desirable results: age and sex not affecting its exhibition."—*Jour. of Mat. Med.*, April and May, 1858.

As regards the effect of Gelseminum in this class of diseases, it would seem, from the promptness of its action, to have a direct effect upon the morbid condition of the system, or cause that produces the disease.

Typhoid or enteric fever is a disease in which Gelseminum exhibits, probably, its most extraordinary powers; and if medical reports can be relied upon, it would seem that the disease was easily managed by the new remedy. But I have met with cases, now and then, which resisted its influence, and doubt not others have; therefore, we cannot look upon it as a specific in this disease, or a remedy superior to veratrum viride, in all cases.

Dr. Nash writes:—"I have, in two instances, succeeded in relieving patients within twenty-four hours, whose cases presented all the primary symptoms of veritable *typhoid fever*."

Dr. Miller writes:—"I am perfectly satisfied that Gelseminum will cut short typhoid fever, when given early in the disease." Very soon after the system has come under the full influence of the remedy the pain in the head abates, sleeplessness is relieved, and the pulse reduced in frequency and force; inflammation of the internal organs is stayed, and the patient, in most instances, enters into convalescence in from six to ten days from the commencement of treatment.

Yellow Fever.—Gelseminum has been employed at the South in this disease, instead of quinine, to suppress the fever by its sedative influence. Among those who report most strongly in its favor are Drs. White and Ford, of Charleston, South Carolina, who found it very effectual in cases characterized by great irritability of the stomach. The total number of cases treated by them with Gelseminum was twenty-four. Of the whole number treated, two vomited black vomit, five passed black vomit downwards; in three cases hemorrhage occurred from the tongue, gums, or nasal passages. One woman was in the sixth month of her pregnancy, and did not abort. No marked prostration was caused by this remedy.

In diseases of the heart and arteries, this remedy may be used with advantage; in *hypertrophy* of the heart, without valvular disease, the result of irritation, it is an admirable remedy; also in functional palpitation of the heart, dependent upon plethoric, anæmic, or nervous disorder.

It has been recommended in *inflammation of the brain, angine bronchitis*, pneumonia, and the inflammatory conditions of scrofula and phthisis. Hæmoptysis also offers an indication for the use of this remedy, which may be given to reduce the action of the heart when there is active arterial excitement.

I have used the remedy in *convulsions* and tetanic spasms, and in some instances these diseases have been averted by its timely use. *Headache* of the nervous kind may often be relieved, and I have found no one medicine so useful in this troublesome disease. *Neuralgia*, in its various forms, may be treated with this remedy, both internally and externally, with the hope of benefit. In coryza, *or cold in the head*, this is one of the best remedies I have ever used; it cures the severest cases in from twelve to forty-eight hours. It is said to be useful in *intermittent fever*, especially when combined with quinine, or followed with quinine after the pulse is reduced.

Preparations: Powder, infusion, decoction, fluid extract, tincture and gelseminin.—The fluid extract is a standard preparation, and from it most of the other preparations can be made—the *tincture*, by adding ℥iv. of the fluid extract to a pint of diluted alcohol, or by taking ℥iv. of rad. gelsem. semp. to one pint of diluted alcohol. M., and digest fourteen days, then filter. The dose of the fluid extract is from two to twenty drops; tincture, from twenty to sixty drops; gelseminin, half to two grains, repeated once in three or four hours, till some observable effect is produced upon the pulse, or until it is reduced to sixty-five or seventy beats per minute.

I was informed by a physician of Concord, N. H., that a convict in the State Prison swallowed one and a half ounces of the fluid extract, with intent to poison himself. The effect was great prostration, nausea and vomiting, dilated pupils, inability to speak or move, coldness of the surface, &c. The effects passed off, with proper antidotes, in about twenty-four hours.

Iron and Its Preparations.

[CONTINUED.]

TARTRATE OF POTASSA AND IRON.—Dose, gr. x. to ʒ ss. Given in solution, or combined with an aromatic or bitter, in the form of bolus. It is one of the soluble salts of Iron. From its slight taste and ready solubility, it is one of the best ferruginous preparations for children. It combines the tonic properties of the Iron with the mild cooling purgative action of the neutral salt. In cases of plethoric amenorrhœa it serves its specific purpose in supplying the requisite hæmatosin, at the same time keeping up the necessary laxative action. Thus it is useful in chlorosis and anæmia with constipation.

℞.—Tartrate of Potassa and Iron,	℥ iii.
Distilled Water,	℥ xvi.

Dissolve and filter. A tablespoonful to be taken, pure, or mixed with some tisane. Used in chlorosis, anæmia, chloro-anæmia, and phagedenic syphilitic ulcers.

℞.—Tartrate of Potassa,	ʒ ss.	
Distilled Water,	℥ ii.	
Cinnamon Water,	ʒ ii.	
Syrup of Tolu,	℥ ss.	M.

From one to four tablespoonsful to be taken daily, in the same cases as the last.

℞.—Tartrate of Potassa and Iron,	ʒ iiss.
Syrup of Tolu,	℥ xvi.
Cold Water,	q. s.

Dissolve the salt in the water, and add the solution to the syrup. From two to six spoonsful to be taken daily, in chlorosis, anæmia, &c.

℞.—Simple Syrup,	℥ xvi.
Tartrate of Potassa and Iron,	
Iodide of Potassium,	*aa.* ʒ iiss.
Cinnamon Water,	ʒ iii.
Water,	ʒ ii.

Dissolve the salt in the filtered water, add the syrup, and shake them together. From two to six tablespoonsful to be taken daily. Used in scrofulous affections accompanied by chlorosis.

℞.—Tartrate of Potassa and Iron, - - - - - ℥ ss.
Extract of Cinchona, - - - - - - ʒ iiss.
Excipient, - - - - - - - - - q. s.

Mix, and divide into 100 pills. From one to fifteen to be taken daily. Used in the treatment of phagedenic syphilitic ulcers, and in most cases where the use of Iron is indicated.

℞.—Tartrate of Potassa and Iron, - - - - ℥ ss.
Extract of Rhatany, - - - - - grs. lxxv.
Excipient, - - - - - - - - q. s.

Mix, and divide into 100 pills. From one to ten to be taken daily. Used in chlorosis accompanied by menorrhagia, and in anæmia from hemorrhage.

FERRUM AMMONIATUM.—Dose, four to twelve grains, in the form of pill, electuary, or solution, several times a day. Formerly used under the names of *flores martiales* and *ens martis.* It unites aperient properties with those belonging to the chalybeates generally, and is said to have been used with advantage in amenorrhœa, epilepsy, scrofula, rickets, &c.

Tinctura Ferri Ammonio-Chloridi.—This is simply a solution of the above in diluted alcohol.

VINUM FERRI.—Dose, one to two tablespoonsful, given several times a day. It is a feeble chalybeate, though applicable to many cases requiring the use of Iron, and in which the stimulant effect of the wine may be useful, or at least is not contra-indicated. A good substitute may be made by dissolving an ounce of tartrate of Iron and potassa in twelve fluid ounces of water, previously mixed with an equal measure of sherry wine.

LACTATE OF IRON.—Dose, one to two grains, repeated at moderate intervals. Obtained from the action of lactic acid on Iron filings. Its combination with an animal acid renders it easily assimilated. It is well borne by the stomach, and always sensibly increases the appetite. It has been used in well-marked cases of chlorosis, and with eminent success. It acts equally well whether the chlorosis be accompanied by amenorrhœa or not. Dr. Brainard, of Chicago, has treated, with success, a large erectile tumor of the orbit, by infiltrating it by injection with a fluid drachm of a solution of lactate of Iron, containing eight grains of the salt. *Chalybeate bread* has been administered in one of the largest hospitals of Paris to chlorotic patients, and with the best effects. From four to five grains of lactate of Iron may be mixed with every three-and-a-half ounces of bread, without giving it any unpleasant taste or injuring its quality. Iron by hydrogen, and also hydrate of (oxide of) iron, are often beneficially given to children, in the form of lozenges, chocolate, biscuits, &c.

℞.—Lactate of Iron,	ʒj.
Powdered Liquorice,	ʒj.
Honey,	q. s.

Mix, and divide into forty pills. From one to six to be taken daily.

℞.—Ferri Lactat.,	ʒ vii. grs. 43.
Sacchar.,	℥ xiss.
Mucilag. Acaciæ,	q. s.

Make into lozenges, each weighing ten grains, which will contain three-quarters of a grain of the salt.

℞.—Lactate of Iron,	ʒj.
Boiling Distilled Water,	℥ viss.
White Sugar,	℥ xiii.

This syrup is more convenient than the lozenges, because the ferruginous taste does not remain so long in the mouth.

℞.—Lactate of Iron,	
Powdered Althea,	*aa.* grs. xvss.
Honey,	q. s.

Make twenty pills.

DENTRIFICE POWDER,

(To prevent the teeth being blackened by the preparations of Iron.)

℞.—Powdered Cinchona,	
Tannin,	
Vegetable Charcoal,	*aa.* ʒ iiss.
Porphyrize with care, and add	
Essence of Cloves,	5 drops.

A soft brush to be moistened and dipped into powder, the teeth rubbed with it, and the mouth thoroughly cleansed with water.

Ferri Citras.—Dose, three to five grains. A combination of Iron with a vegetable acid. An excellent tonic, with quinine, in intermittents, and in old chronic intermittents where the indication is to restore strength. The citrates are not decomposed by alkalies, and may be given with them, if desirable. This is one of the most agreeable of the chalybeates, and perhaps equally effective with any. It resembles the tartrate and lactate of Iron, and may be given in the same cases.

℞.—Citrate of Iron,	℥j. (Troy).	
Simple Syrup,	℥v.	

Dose, thirty drops to one teaspoonful.

The syrup of the citrate of Iron of Beral is a saccharine solution of the citrates of ammonia and sesquioxide of Iron.

FERRI AMMONIO-CITRAS.—Dose, five grains, several times a day; conveniently administered in porter, which conceals its taste. Its ready solubility gives it an advantage over the citrate.

℞.—Take of *Iron filings*, four ounces; *bitter oranges*, four ounces. Remove the peel, the white, and the seeds; beat them in a stone mortar, and let the paste remain at rest for two days; then pour upon it *Madeira wine*, ten ounces, and *spirit of orange peel*, two ounces.

According to Mr. Gore, it possesses the most agreeable odor and taste of any medicinal compound ever introduced into practice. It is aromatic, carminative and tonic; and he adds, that he has no doubt it will supersede the preparations in general use, when once it has been fairly tried. In strumous habits, in passive uterine hemorrhage, in anasarca from general debility, in chlorosis, in malignant disease (in which Iron has been extolled), and in all diseases that arise from a deficiency of tone, Mr. Gore considers this preparation to be "of exceeding utility, from its agreeable and chalybeate qualities." He suggests also its use in chronic bronchitis, in which he gives it with ipecacuanha wine.

FERRI ET MAGNESIÆ CITRAS.—Dose, four to fifteen grains, in solution, powder, or pill. This salt is perfectly soluble in water, and has the advantage over the ferro-citrate of ammonia, that it is not deliquescent, so that it can be given in powder. Moreover, it does not induce constipation, like most of the salts of Iron.

℞.—Ferri et Magnes. Citrat.,	p. x.	
Dissolve in		
Aq. Flor. Aurant,	p. xx.	
Syrup,	p. cc.	M.

FERRI ET QUINIÆ CITRAS.—Citrate of Iron and quinia may be given in the form of pill, whenever a combination of these tonics is needed. An extemporaneous formula may be made by uniting citrate of Iron and citrate (or even sulphate) of quinia together, which may be given either in pills or solution.

FERRI TANNAS.—Dose, ten grains to half a drachm in the day, given in syrup or in pillular form. Has been highly extolled in chlorosis, and wherever astringent chalybeates are indicated. *Ink*, which is an aqueous solution of the tanno-gallate of Iron, has long been a popular and effieacious application to *herpes circinnatus*, or ring-worm.

℞.—Syrup,	℥ xii.	
" Aceti,	℥ iv.	
Ferri Oxidi Magnetici Citrat.,	ʒ iiss.	
Ext. Gallæ.,	ʒ j.	M.

℞.—Sulphate of Proto-Oxide of Iron (green sulph.),	ʒ iiss.
Tannin,	ʒ ss.
Water,	℥ ii.

Used for touching phagedenic syphilitic ulcers, two or three times a day.

From Parish's Practical Pharmacy.

The Cinchona Alkaloids and Their Salts.

QUINIDIA.

[CONCLUDED.]

Quinoidine is sold at a still lower price than either of the crystallized products. I am told that the demand for it has not justified manufacturers in preparing all that is produced for sale.

Detection of Adulterations and Impurities in Sulphate of Quinia.—The behavior of the cinchona alkaloids and their salts has been mentioned under their respective heads, and, with the aid of these tests, it is not very difficult to distinguish the alkaloids, when pure, from each other. There is more difficulty experienced in detecting the presence of one alkaloid in another, or in finding out foreign substances sometimes fraudulently mixed with them. The following are the various tests proposed for these purposes:—

1. *Zimmer's Test.*—Sixty drops of ether, twenty of aqua ammonia, and ten grains of the sulphate, previously dissolved in fifteen drops of water and ten drops of dilute sulphuric acid, made of one part, by weight, of sulphuric acid, to five of water, are mixed in a test tube; the quinia, being soluble in ether, will not appear, but any admixture of cinchonia, or above ten per cent of quinidia, will separate as a layer of white powder, between the aqueous liquid and the supernatant ether. If quinidia be present, it will be dissolved by a large addition of ether, while cinchonia will not. If less than ten per cent of quinidia is present, the mixture will be clear, but the quinidia will soon crystallize, while quinia will, after a while, gelatinize the ethereal solution.

2. *Rump's test* is said to be even more delicate than the former. Six grains of the sulphate, one-half drachm of ether, two or three drops of aqua ammonia, are well agitated in a test tube; pure sulphate of quinia will yield a perfectly transparent solution; if five per cent of sulphate of quinidia is present, the solution will likewise be clear, but after a while will become turbid; ten per cent of quinidia will leave a portion undissolved; with less than five per cent, the solution is to be evaporated spontaneously, quinidia will then be left in crystals, but quinia as a gummy mass.

3. *Liebig's Test.*—Fifteen grains of the salt are rubbed with two ounces of aqua ammonia, this is heated until nearly all odor of ammonia has disappeared, and agitated with two ounces of ether. If a turbidness remains on the margin of the two liquids, cinchonia is present.

The ethereal solution may, besides quinia, also contain quinidia, which, like the above, will be left in crystals on spontaneous evaporation.

4. The presence in the sulphates of cinchona alkaloids of common adulterations may be detected as follows:—

The sulphates are entirely soluble in cold dilute sulphuric acid, and entirely dissipated by heat. *Sulphate of lime* may be detected by its insolubility in alcohol, and by remaining, after ignition, on a piece of platina foil. *Starch* would remain insoluble in dilute acid and in alcohol, and would be recognized by the well-known iodine test. *Stearic* and *margaric acid* and *resins* would float in the acid solution, and be dissolved by ether. *Salicine*, if more than ten per cent were present, would show, with concentrated sulphuric acid, a red color. *Phloridzin* would be detected as yielding a yellow color with the same reagent, or by the yellow, red and blue color imparted to it by gaseous ammonia under a bell glass. *Sugar* or *mannite* would be blackened by concentrated sulphuric acid. *Oxalate of ammonia* would be detected by giving off ammoniacal vapors, with caustic potassa. Solution of caustic baryta dissolves *salicine*, *phloridzin*, *gum*, *mannite*, &c., but leaves the alkaloids and sulphate of baryta; in the solution, after it has been freed from baryta by carbonic acid, these substances may be detected.

Besides the above, the following alkaloids have been discovered in various barks:—

Aricina, derived from Arica, the port from whence the bark is sent, is prepared like the other cinchona alkaloids, and crystallizes in white, transparent needles, which gradually develope a bitter, warming, sharp taste, melt between 356° and 374°, are insoluble in water, soluble in ether, alcohol and ammonia. It is colored green by concentrated nitric acid.

The salts are crystallizable, bitter, easily soluble in water and alcohol, insoluble in ether.

Paricina has been discovered in Para bark, by Winckler.

It is a white mass, uncrystallizable, electric when rubbed to powder, little soluble in water, easily soluble in ether and alcohol, and is left, after evaporation, as a golden-yellow, resinous mass. Its salts are amorphous, resinous. It appears to bear to aricina the same relation as chinoidina to quinia.

Pitayia, discovered by Peretti, is prepared from the aqueous extract, which is exhausted by alcohol, evaporated, dissolved in water, and precipitated by ammonia, washed with ether, and crystallized from boiling water.

It is in colorless prisms, volatile, not bitter. Its salts are bitter and crystallizable.

Carthagia, discovered by Gruner, in Carthagena bark, crystallizes in needles, is tasteless, insoluble in water, soluble in alcohol.

Its salts are bitter, crystallizable, resembling the quinia salts, but are said to be destitute of febrifuge qualities.

EMETIA.

Emetia is the active principle of ipecachuana, and is also present in the roots of several species of viola.

The root is extracted by acidulated water, and precipitated by ammonia; to obtain it pure and white, according to Merck, it is dissolved in dilute muriatic acid, precipitated by corrosive sublimate, dissolved in alcohol, decomposed by sulphuret of barium to precipitate mercury, and sulphuric acid to precipitate baryta, diluted with water, the alcohol evaporated, and the sulphate of emetia precipitated by ammonia.

It is a white, inodorous powder, not crystalline, of a bitter taste, soluble in alcohol, sparingly so in water, nearly insoluble in ether and fixed oils, fusible at about 120° Fah. Its native salt existing in the root is taken up by water, wine and diluted alcohol. It assumes a dirty green color by sulphuric acid, is converted first into a yellow, bitter, resinous substance, afterwards into oxalic acid. In minute doses it acts as a powerful emetic; in larger doses it is poisonous. Nearly all its salts are easily soluble in water; the acid salts, according to Liebig, are crystallizable. The commercial *emetia* is very impure, and not preferable for ordinary use to the various Galenical preparations of ipecac, in which the peculiar astringent and acid principles are associated with the alkaloid.

The *emetinum impurum* of some Pharmacopœias, which in the French *emetin colorée*, is obtained by exhausting the alcoholic extract of ipecacuanha with water, neutralizing with carbonate of magnesia; and evaporating the filtrate.

Arnicina is prepared by exhausting the flowers with alcohol mixed with some sulphuric acid, treating tha tincture with lime and the filtrate with sulphuric acid, an excess of carbonate of potassa and ether, which dissolves it.

It is solid, slightly bitter, not acrid; its odor resembles that of castor; it is slightly soluble in water, more in alcohol and ether. It is little known.

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BLEEDING PILES.—One of the simplest and surest means for temporarily checking this kind of hemorrhage is the application of perchloride of iron dissolved in glycerine, and applied on a piece of lint.—*Braith. Retrospect.*

From the New Medical and Surgical Journal, of January, 1860.

Diphtheria.

By S. L. Bigelow, M. D., of Paris.

(Communicated in a Letter to Prof. Warren Stone, M. D., of the University of Louisiana.)

[We give below the concluding portion of the interesting letter on diphtheria from Dr. S. L. Bigelow, of Paris, to Prof. Warren Stone, M. D., of the University of Louisiana, want of space not permitting us to publish it entire in our last number.—Eds. Jour. Mat. Med.]

In addition to the above, I commence immediately with the use of tonics, stimulants, and the most nourishing possible fluid animal food. Quinine every three hours, in as large doses as can be borne without producing severe cerebral perturbation; bitters composed of cinchona, colombo, camomile, quassia, bitter orange peel, &c., formed into a strong infusion, to which I add brandy and a little syrup. The following is my ordinary formula:—

℞.—	Cort. cinchona flav. cont.,	℥ ij.
	Rad. gentian, cont.,	℥ ij.
	Rad. colombo, cont.,	℥ ss.
	Cort. aurant, flor. anthemis, quassia amara,	*aa.* ℨ ij.
	Aq. bulliens,	Oij.
M.	Ft. infus. et add spts. vini gallic,	℥ vj.
	Syr. cort. aurant,	℥ iv.

Of this I give ordinarily to an adult from half to two-thirds of an ounce five or six times in twenty-four hours. Strong *bouillon* of beef, mutton and chicken, cooked together until it forms a jelly on cooling, from which may be made tapioca or vermicelli soup as a change, a teacupful every three or four hours, with occasionally a soft-boiled egg instead. Ale, porter, sherry, brandy and water, from time to time, in such quantities as may be borne. Of course, no fixed laws can be given for the administration of these things, but the sagacity of the physician is always with him to act as his mentor and guide. If the necessity occurs, I administer from time to time a purge of the citrate of magnesia, *always* in divided doses, repeated at intervals, if necessary, in order not to produce mischief by an intemperative dose. I always repeat, every two or three days, my tepid bath, of an hour. The patient ought always to be visited from three to six times daily, and the first visit should be always very early and the last one very late. The topical applications should be made as frequently as possible by the physician himself, as his experience and knowledge enables him to perform them with much greater effect than the nurse or member of the family can attain. The insufflations are to be continued day and night so long as a tendency to the formation of the false membrane continues; and I am in the habit of alternating between the powdered alum and tannin at each hour—more to take the benefit of the chances than because I am convinced that I obtain better results. I find that under the above course of treatment, promptly applied and vigorously continued, the larynx is, in the majority of cases, spared from the membranous exudation, but still it too frequently becomes invaded in spite of all we can do to permit me to pass over the terrible accident in silence. And now comes a solemn moment for solemn remarks. Many authors of high merit have counselled, and still advise, the use of emetic in high doses, to produce the expulsion of the false membrane from the larynx or trachea. I have never yet prescribed a single grain of emetic in a case of angine couenneuse, and I hope that it may never be given me so to do. I protest, in the most serious manner, against this advice, which may, no doubt, be good at times in membranous croup, for at all hazards, and at all costs, we must maintain the integrity of the stomach and sustain the forces of the patient, not only for the duration of the disease, but for the convalescence, fearful at best. The presence of the spoon in the throat gives rise to efforts of coughing, sufficiently powerful to answer all the ends of an emetic in the expulsion of the membranes, and it deteriorates in no wise the integrity of the action of the stomach; and let the stomach fail, and I will give up all as lost. There are those in authority who counsel blood-letting, under conditions of pulse in this disease. I would as soon put my lancet into the vein of a moribund typhique as to take an ounce of blood from a patient with membranous sore-throat, under any circumstances of the disease which I have ever witnessed or can imagine. Your baths, which are in no wise debilitating, and your intestinal evacuations by means of gentle aperients, are sufficiently sharp-pointed lancets.

One word more and I am done, my dear doctor and master, with what I have to offer in regard to the treatment of this formidable and fearful disease. We have arrived now at the most terrible episode of the disease we can encounter—imminence of death by suffocation from the accumulation of plastic lymph in the larynx. The only aim then left is to still prolong the life of the patient, and then the chances of aid from general treatment—the only means is *tracheotomy;* and I know that the word will pale on your ear. I know that you have said, and under circumstances of the most appalling nature, that you would never open another trachea in a case of croup. I know, too, that you have since been guided by the high star of your intelligence to do it more than once. Do it, dear doctor, and *always* do it, but do not do it too late. It is impossible to perceive the moment away from the bedside of the patient, but to the sagacious physician shall it be given *to do*, when the time comes. I think that Dr. Gay, of Boston, has *said* the best and *done* the best of any living man, not even excepting Trousseau, in regard to the question of the proper time to operate and the proper treatment to pursue after performing tracheotomy in membranous croup—he operates early. And let me assure you that my profound belief is that you must operate even *earlier* in a case of angine couenneuse than in a case of croup—for you doom your patient to a certain death if you allow his vital powers, his powers of assimilation, to arrive at an ebb when ingestion becomes null before you operate. Operate while he can still assimilate—it is *not* as Malgaigne would have it, in his arbitrary contempt for *medical* surgery, an operation a thousand times fraught with peril in itself; it is simply a flea bite in comparison with the sure results of a tardy operation.

And now I advise what I have never seen advised or know to be put into practice, except by myself, after the operation—not only to continue the insufflations of alum into the pharynx, but to practise them immediately, constantly, and vigorously into the trachea through the tube inserted in the ordinary manner into the trachea, and to perform them also with the same vigor and as well as you can into the larynx, by turning the tracheal tube in the opposite sense and blowing it the most effectively possible upward into the larynx. I need hardly add that the same general treatment is to be continued constantly the same as before the operation, which only constitutes an episode.

I find that the "few words" which were to form my letter to you have procreated already to an alarming extent, and as yet I have not said one word in regard to the convalescence from the disease and the accidents which the most frequently accompany it as sad satellites. I promised early in my letter also to speak specially upon the sequent progressive paralysis. If you will still bear with me, I will continue this hasty and wholly unpremeditated document. Convalescence arrives, and we naturally add to our already nourishing fluid diet, solids, such as beef-steaks *underdone*, roast beef *underdone*, mutton chops, poultry, game, vegetables, &c. I forgot, in my hurried ramble, to say, that throughout the whole course of the disease I gave an abundance of such fruits as peaches, grapes, apricots, cherries, currants, raspberries and strawberries, each or all in season, with lemonade and morsels of ice as a beverage, also soda water and syrup of raspberries, currants and gooseberries, as beverage. All this may be continued during the convalescence, accidents to be met as the discretion and judgment of the physician may dictate.

I forgot also to state that I prefer my patient in angine couenneuse to change his chamber daily, or more frequently even, as in typhoid fever, and to have free and constant access to fresh air from without.

It is generally two or three weeks after the disappearance of all traces of false membranes from the pharynx that the symptoms of paralysis commence. The muscles of the soft palate are the first to indicate the invasion of this new series of accidents—it is indicated by the nasal sound of the voice, and by the regurgitation by the nose in the act of swallowing of liquids taken in by the mouth. During this period of convalescence, patients, instead of gaining strength, activity and flesh, lose in each particular respect. Pains in the back and joints supervene, numbness and prickly sensations in the feet and legs manifest themselves, insensibility and partial or complete loss of the power of locomotion. The fæces and urine are evacuated involuntarily, the tongue trembles, and articulation becomes imperfect, and sometimes impossible. The appetite generally remains good, the intelligence is preserved, but there is a tendency to indolence. The parts paralyzed become less sensible to the touch, or in some cases entirely senseless to tactile excitation, but the electric sensibility is never destroyed. The superior members are also subjected to the same paralytic phenomena as the inferior, and paraplegia even sometimes occurs in a marked degree. The muscles of the face and eyes even become involved also, in their turn, in certain cases. There is evidently no coincidence in this condition of paralytic phenomena with the disease in question, as all known observations show that the accidents commence in the same manner and arrive at the same or similar results. The ordinary termination of the paralytic accidents is recovery. For their cure, iron tonics, generous diet, cold effusions, warm clothing, and exercise in the open air are the best. Strychnine, nux vomica, and electricity have seemed to me to exert no favorable influence in their cure; on the contrary, sometimes the patient dies under this state of things, but no pathological phenomena are left to indicate the material lesion or cause of death. Diphtheritic paralysis is probably the effect of the toxic poison of the disease—but nobody knows. All that we can say at present is, that it is a disease which leaves no palpable traces in the nervous centres, that it is certainly caused by diphtheria, and that we cannot trace the cause to the effect.

I have said all I have to say for the moment, dear doctor; and I trust in you to excuse my apparent or real egotism in giving you only my own personal views upon a subject which is deeply agitating the entire medical world. You asked it of me, and I have *literally* given what you asked. Let me hear from you again soon; and believe me,

Yours truly,

S. L. BIGELOW.

Case of Tænia.

By D. N. FERGUSON, M. D., of Carthage, Jefferson Co., N. Y.

Miss Z., aged 29 years, German, applied to me on the 21st of September last, to be treated for tape-worm, from which she had long suffered. On investigating her case, I found that her general health, which had been previously good, was now somewhat impaired. I learned on further investigation that she had frequently passed pieces of tape-worm, and at one time a piece seven feet in length. I commenced the treatment of the case by the use of meal gruel, sparingly administered during the day, September 21st. On the following morning ordered the following cathartic:—

℞.—Pulv. jalapæ, ext. colocynthidis,.............*aa.* gr. vi.
Podophyllin,....................................gr. iv.

Mix. and make into nine pills, three to be given every four hours, and free catharsis procured. Before retiring the patient was allowed to partake of meal gruel.

23d, at 9 o'clock A. M., administered oleum terebinthinæ, f℥ i. At 12 M., ordered oleum ricini, f℥ iss., and at 4 P. M. a tape-worm 25 feet in length was expelled, and of that variety denominated tænia lata.—*Phil. Med. & Sur. Jour.*

From the Southern Medical and Surgical Journal, September, 1859.

Veratrum Viride in Chorea.

By Dr. Paul De Lacy Baker, of Eufaulu, Alabama.

Dr. Baker's experience is confined to one case of chorea, but he corroborates it by three similar cases, furnished to him by a friend—Dr. Terry, of Eufaula, Alabama. Dr. Baker also suggests a trial of the drug in tetanus and hydrophobia.

1. *Dr. Baker's Case.*—On the 17th of June, 1858, I was called to a young lady suffering from a violent attack of chorea. The mother informed me that it had been very gradually coming on, for a month or two; her symptoms, when first visited, were distressing to the last degree; her entire muscular system was in continuous and tumultuous commotion, so much so, that it was with difficulty that she could be kept upon the bed. This case passed on from bad to worse, notwithstanding the most assiduous attention and energetic treatment; tonics, antispasmodics and anodynes were exhausted without avail. The spine and nucha were cupped and blistered without benefit, chloroform was administered both internally and by exhalation—in fact, every remedy that could be legitimately suggested was resorted to, but without success; and it seemed at last that the girl must die from exhaustion and want of sleep. Opium, and its various preparations, appeared to make her worse; once or twice I suggested the employment of veratrum viride, but it was postponed until the 18th of the month, when my partner, Dr. Thornton, under whose especial care the case had been, was called off to Georgia. On that day, just as I was starting to visit her, my friend Dr. Terry, hearing of the unusual violence and obstinacy of the case, stopped me and proposed that I would give veratrum viride a trial, assuring me that he had thrice used it in chorea with the most satisfactory results. So, I concluded, both from my own experience and from his positive statement, to withdraw all other medication and give the veratrum viride a full and fair trial. The family had given up all expectation of her recovery. I told them, however, on my arrival, that I had come with a new remedy, the last and only one that had not been tested, and that I felt convinced the girl would recover under its use. I at once commenced its administration, and as she was gradually brought under its influence the turmoil began to cease; the face, which had been worked by its muscles into the most ludicrous and horrible distortion, became placid and intelligent, the head had ceased its everlasting jerking, the extremities lay still, the body left off writhing, *and the patient quietly passed into a peaceful and profound slumber.* This sleep was deep and long, as it was the first, with few and slight exceptions, that she had had in nearly two weeks, and the quiet that the muscles now received was all that had occurred save during those few and short slumbers. At a subsequent visit I found the family cheerful and hopeful, and the patient quiet and sleeping, the pulse but little depressed; there had occurred no vomiting. I roused her, and, to my great

satisfaction, when awake, there was no jactitation of the extremities, and but very little twitching of the muscles of the face.

In this case I thoroughly tested the influence and power of veratrum viride, for the first few days; if its administration was withheld the commotion began gradually to return, but all would again become quiet upon resuming its employment. At first, so continually did she sleep under the quiet that it induced, that the family called the veratrum preparation "the laudanum mixture," notwithstanding they were aware that she had taken large quantities of morphine, without benefit, in our efforts to induce sleep. The veratrum was continued for several days, the convulsive movements ceased altogether, the muscles became completely obedient to the will, and the lady returned to perfect health and blooming beauty, under a judicious and properly regulated tonic course of treatment.

2. *Dr. Terry's cases:*

Case 1.—I was called in Randolph County, Georgia, to visit a child aged twelve years. It had been confined to bed for three weeks, and was reported to have been under treatment for about six weeks; first for worms, with calomel, spigelia, wormseed, &c., and subsequently for chorea (with which I found it suffering), with cimicifuga, iron, quinine, and the usual routine treatment, until the child was apparently dying.

It is not in the power of language to convey a proper conception of the truly pitiable state in which I found this child; no description can afford any adequate idea of its appearance and condition. It had slept none, neither had it taken any nourishment for days; it was evidently dying from exhaustion and inanition, the muscular commotion was violent, universal, and unaffected by sleep; the lips embossed with foam, worked up by a continual champing of the teeth. I instituted the following treatment:—Three drops of veratrum viride were administered every three hours, the vehicle for each dose being a teaspoonful of gum water, a small portion of which was introduced into the mouth every few minutes, until the whole was given, the medicine being in this way rather *absorbed* from the mouth, probably, than swallowed. In twenty-four hours I had the gratification to see the symptoms greatly improved. The muscles were much quieter, and the child could swallow without difficulty (the trouble in this respect had constituted the greatest embarrassment in the treatment). I continued the veratrum viride in connection with iron and quinine. At the end of the fourth day all convulsive action had ceased; the veratrum viride was still further continued, though in smaller doses, and at long intervals. Quinine, iron, and generous diet completed the cure promptly.

Case 2.—Girl, æt. fifteen. This was an ordinary case. She was purged freely, after which four drops of veratrum viride were administered every three hours. Under its use the convulsive phenomena soon disappeared, after which the veratrum viride was continued for a few days at long intervals. This case also promptly convalesced under the use of iron, quinine and generous diet.

CASE 3.—Woman, æt. thirty-six; had borne no children; was subject to menorrhagia; immediately after an attack of which she was taken with chorea, marked by continued nodding of the head and violent convulsive action in one arm, together with slight jactitation of one leg. In this case I directed six drops of veratrum viride every three hours; the fourth dose occasioned slight nausea, and after the fifth dose the convulsive action ceased, when the veratrum viride was withheld. There followed, in the course of eight or ten hours, a return of the symptoms; the medicine was again resorted to, with the former quieting result. The doses were then reduced, but continued for several days, at long intervals. This case, like others, recovered under the use of quinine, iron and generous diet.

Use of White Paint in Some Cutaneous Maladies.

By Mr. ALFRED FREER.

"I first became acquainted," says Mr. Freer, "with the great efficacy of white paint in the treatment of erysipelas by seeing it used by my late father and by my brother. It is, indeed, in this disease that the most striking benefit results from its application. I have never yet met with a case of this nature where it has not done immense good. I find it far superior to lead lotions, mucilage, hot fomentations, nitrate of silver, or collodion. After erysipelas, the paint proves of the greatest service, perhaps, in eczema in its several forms. In chronic eczematous eruptions of the aged it affords much comfort, and often speedily effects a cure. Of late years I have extended its employment to other complaints of the skin, including herpes in its several forms. I have tried it in some cases of smallpox, with the view of diminishing the number of vesicles on the face, and of controling their size. The latter indication it seems likely to fulfill; but I cannot speak with confidence about the former, the papules being already numerous at the time of my visit. I have also used it in several cases of carbuncle and furuncle. The first was in the instance of a huge carbuncle, situated on the loin of a man, and rapidly extending, notwithstanding free incisions, linseed poultices, and appropriate constitutional treatment. I applied a thick, wide circle of paint round the swelling, and dressed with resin ointment and cotton wool. There was no advance of the disease from that time, the centre rapidly broke up, and recovery took place. It is, however, probable that the omission of the warm poultice may have contributed to the improvement, for I have often observed that warm poultices, however well made, seem to foster and spread carbuncular inflammations.

"The paint seems to act in two ways: first, and chiefly, as an efficient excluder of the air—that great irritant to the cutaneous surface when disordered; and, secondly, as a direct sedative to the sentient nerve filaments, rendering them less prone to become involved in inflammatory action. In boils it relieves the painful tension, and favors resolution. In some forms of painful ulcers of the leg, of a small size, it gives great relief. In galling of the skin, where anasarca is present, it is also of use, and is the best application that we have in burns of the first and second degree. But it is in erysipelas that its triumph is most manifest; the patient soon finds the comfort of it; the tight shining skin soon becomes wrinkled and shrunken; indeed, the inflammation very rarely extends after the second or third painting.

"All my friends to whom I have recommended the pigmentum album speak highly of it; and one, who is a surgeon in the Peninsular and Oriental Company's service, has used it for the last two years with great success. The manner of applying it is by means of a feather, painting the affected parts and a *little beyond*, and laying on a fresh coat every two hours or so, until a thick layer is obtained, and then sufficiently often to maintain a covering. In erysipelas it peels off in a week or so with the shed cuticle, leaving beneath a smooth, clean, healthy surface. Patients are struck with the benefits they derive from its employmant."—*Lancet, June* 18, 1859.

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Treatment of Fissure of the Anus by Injections of Rhatany.

By Dr. Trousseau.

"We have seen recently," writes the foreign correspondent of the journal from which this quotation is made, "a somewhat deep and painful fissure of the anus successfully treated by M. Trousseau, by means of injections of ratania administered several times in the twenty-four hours, together with the use of mild laxatives. It resulted from painful defecation, the bowels having been constipated for some days previously. The sufferings of the patient were intense, and lasted for fourteen hours consecutively. In reference to anal fissure, Trousseau denies the old theory, that it is produced by spasmodic action of the sphincter; on the contrary, he believes that it is most generally the result of irritation caused by the acrid discharges of the vagina finding their way to the anal mucous membrane, and completed during a state of constipation. Although spasm of the sphincter is almost an invariable accompaniment of this painful complaint, it can only, according to Trousseau, be regarded as an effect; in other words, the spasmodic action is entirely voluntary, and kept up by the patient in order to save herself the pain to which the irritable fissure gives rise, as is the case with a child who, when laboring under a chopped lip, purses up its mouth when it eats or laughs. M. Jobert adopts the same view as Trousseau; both condemn Boyer's method, which consists in the division of the fibres of the sphincter muscle, as altogether unnecessary."—*Med. Times and Gazette, Feb.* 5, 1859.

Selections.

SEQUELÆ OF MEASLES AND SCARLATINA.—M. Scoutetten, of Metz, has devised the following method to prevent the unfortunate sequelæ so frequently supervening after an attack of measles or scarlatina, as well as to prevent the necessity of confinement to the sick chamber for several weeks after convalescence :—"As convalescence commences—that is to say, when the skin is no longer red with the eruption—he rubs over the whole body slightly warmed oil of sweet almonds or olive oil, and puts the patient in bed again, for two hours. The next day he gives him a tepid bath for an hour, then places him in bed, and if the skin is very dry a new friction with the oil is made. These two frictions and one bath are usually enough to remove all danger. Still, in severe cases, it is well, to avoid any risk, to repeat the means indicated from time to time, until the skin regains its suppleness. These precautions taken, convalescents may be permitted to go out without fear of bad results."—*Braithwaite's Retrospect.*

POISONING BY STRYCHNIA.—The poison of strychnia is completely neutralized by nicotine. In a case of poison by the former, take a cigar and infuse it in a half pint of water, which give in doses of one tablespoonful every five minutes. Probably when half the quantity is taken a favorable change will be noticed: the muscles will have become relaxed, the spasms less severe, and the intervals between them longer. The infusion may then be given less frequently. Of course, in a healthy person such quantities of tobacco internally administered would produce serious effects; but in this case its effects are antagonized.—*Ibid.*

STYPTIC.—*Solid Perchloride of Iron.*—The perchloride of iron is manufactured in a solid form by Messrs. Hopkins & Williams, of New Cavendish street, in which state it is particularly manageable as a styptic. Another, and perhaps superior way of using it, is to apply, by means of a spun-glass brush, a small quantity of the thick brown fluid, into which the solid perchloride kept in a bottle always deliquesces. It is particularly useful in such cases as excision of the tonsils, bleeding from the deeper-seated gums, &c. No inflammatory action follows this drug.—*Ibid.*

SCARLATINA.—Chlorate of potash must not be given in scarlatina, with the idea that in chlorine something like a specific has been found for the disease—if so given it will fall into disrepute. It is a very valuable remedy for meeting particular indications in the treatment of disease, by arresting the ulcerative inflammation of the fauces, and by its arterializing properties, supporting the restorative powers of nature, when aided by other appropriate treatment. It may be combined with carbonate of ammonia, with the best effects. —*Ibid.*

ASTHMA.—The remedial action of *strong coffee* in relieving an asthmatic paroxysm is well known—but there are two or three practical hints with regard to its administration worth bearing in mind. It cannot be given too strong, and an excessive bulk is thereby avoided which oppressively distends the stomach, and its effects are less rapid. It is best given without sugar or milk, and very hot. It should always be given on an empty stomach, as, if given after a meal, it retards digestion, and thereby favors an attack.—*Braithwaite's Retrospect.*

NEURALGIA.—In cases of superficial neuralgia, especially facial, immediate and considerable relief will generally be obtained from the following local anodyne:—Two parts of spirits of wine or eau-de-colonge, one of chloroform, and one of tincture of aconite; the finger covered with a piece of lint or soft thick linen, is dipped in the liquor and rubbed on the part for a few minutes.—*Ibid.*

CHLORIDE OF SODIUM AS AN EXTERNAL RESOLVENT.—M. Ancelon affirms that chloride of sodium employed externally, whether in powder or incorporated with lard or linseed oil, forms a most admirable resolvent of indurated lymphatic glands. Frictions made with a pomade composed of it will induce an eruption resembling variola, which proves of great use in pulmonary phthisis and in chronic affections of the alimentary canal.—*L'Union Médicale.*

CITRATE ACID IN ACUTE RHEUMATISM.—Dr. Hartung states that this substance acts more efficaciously than lemon juice in acute rheumatism. He forms a mixture with six drachms dissolved in five ounces of syrup. This to be taken in from fifteen to thirty-six hours, the patient also drinking as much cold water as he pleases, and the parts being wrapped in wadding. Of forty-five cases of acute rheumatism, some of them very bad ones, so treated, in two only was the result not satisfactory. Sometimes, even after twenty-four hours of treatment, there is a notable diminution in the pain and fever, although in most cases from two to three days are required to produce this amendment. The remedy does not induce diarrhœa, and it favors transpiration.—*Gazette des Hôpitax.*

MASTICH IN INCONTINENCE OF URINE.—Dr. Debout strongly recommends the employment of the tears of gum mastich in the incontinence of urine of children, in the dose of one drachm night and morning. It may be made into bolus, with syrup, or divided into pills. The cure is usually effected in four days; but if the remedy is not successful in eight days, it is useless to continue it longer. It has proved successful in more than two-thirds of the cases in which Dr. Debout has employed it.—*Union Médicale.*

ASCARIDES.—Use as a simple injection of water, containing five, ten, fifteen, or twenty drops of sulphuric ether, according to the age of the individual, and repeated more or less frequently, as necessary. The author states that this agent has a double advantage: it destroys the larvæ and allays the spasmodic and nervous symptoms produced by the animals.—*Braithwaite's Retrospect.*

Pharmacy.

[From the American Journal of Pharmacy, January, 1860.]

CERATRUM CANTHARIDIS.

By Wm. R. Warner.

Take of

Spanish flies, in fine powder,	5 ounces.
Alcohol, 87 sp. gr. (95 per cent vol.),	q. s.
Rosin,	3 ounces.
Yellow wax,	6 "
Lard,	7 "

Moisten the powdered flies with the alcohol, and pack in a suitable percolator; gradually pour upon it the alcohol until it passes through without much color, which will require usually about two and a half pints. Then evaporate by a gentle heat to the consistency of a soft extract; add the resin, wax and lard; melt them together, and, occasionally stirring, maintain at a temperature of 212° for fifteen minutes. Strain through linen to separate the extractive and other insoluble matter that may be present, and stir until cool. This cerate should have a slight geenish-yellow hue, of rather firm consistency, and possessing in a perfect degree the active properties of the Spanish flies.

The above formula for ceratrum cantharidis is offered as a substitute for the officinal cerate, from its elegance and greater efficacy, which has been fully attested. Its mode of preparation is not difficult, will, perhaps, afford more uniform results, and the additional expense from use of alcohol is scarcely worth considering, as this, in manufacturing largely, may be recovered by distillation. Slight economy may be practised by the use of hot or boiling alcohol, of which much less is required to exhaust the flies of their active principle. Repeated decocting of the flies in water will afford an aqueous extract, which, though containing the virtues of the fly, is not altogether eligible as a substitute for the alcoholic extract in the preparation of this cerate. The heating of the alcoholic extract with the ingredients of the cerate affords a solution of *cantharidin* in the oily matter, and at the same time a separation of the extractive.

According to the researches of Prof. Procter, the active constituent of cantharides in an *isolated* state is sparingly soluble in cold alcohol. In the process here given, however, alcohol is found to be an excellent menstruum, and does readily dissolve the *cantharidin*, while it is associated with a peculiar yellow extractive matter in the fly, as is likewise the case with many other organic principles. Hence it is that though ether is a ready solvent for *cantharidin*, and alcohol is not, the latter is a good menstruum for cantharides.

Philadelphia, October 1859

ADULTERATED NITRATE OF SILVER.

TO THE EDITOR OF THE LONDON PHARMACEUTICAL JOURNAL.

Sir:—An adulterated nitrate of silver has just come into my hands, of which it may not be useless to give a brief description:—

It was supplied by a London house, and is invoiced at four shillings per ounce.

It is wrapped in blue-tinted writing paper; is of a yellowish color; less translucent than the pure article, and presents a dull, close-grained fracture; the crystalline structure being very indistinct.

Altogether, it appears in such a "questionable shape," as at once to rouse suspicion.

The pure salt yields about 63 per cent of silver, but I found this sample to give little more than 55 per cent. The substance with which it is adulterated is nitrate of lead. A trace of iron is also present, which may account for its color.

The proportions are nearly—

Nitrate of silver,	88
Nitrate of lead,	12
Iron, trace,	
Total,	100

With cold distilled water it gives a turbid solution, owing probably to the presence of a difficultly soluble compound of lead, formed during fusion by decomposition of a small portion of the lead nitrate.

I enclose a specimen for your inspection, and, if you think the matter worth the notice of your readers, pray insert this note in your journal.

T. Miller.

Sheffield. [*London Pharm. Journal.*

OPIATE BELLADONNA PLASTER.

Formula of M. Trousseau.

It is employed in the treatment of arthritis, simple or puerperal, threatening to pass into the chronic state.

Every one knows that in this case the ordinary termination is white swelling, and that then amputation is often necessary.

In order that the plaster may be useful it must envelope the articulation. We have only seen it employed for the knee, and the patients have come out cured.

Here is the formula:—

Bread,	750 grammes.
Camphorated alcohol,	100 "

Dip the bread, in pieces, in water until it is perfectly moistened; press strongly, and put into a saucepan on a water bath, and then add little by little the camphorated alcohol. It is absolutely necessary that the whole, when cooled, be perfectly homogeneous, and preserve the form of the vessel so that it can be inverted without becoming detached. Spread the plaster upon a piece of tile broader than long; then apply the opiate belladonna mixture, made as follows:—

Extract of belladonna,	10	grammes.
Extract of opium,	5	"
Powdered camphor,	10	"

Add to the two extracts sufficient water to render them semi-liquid, and incorporate the pulverized camphor. Spread this mixture as evenly as possible on the plaster, leaving a little more in the middle. The edges are covered with glycerine to prevent adhering to the skin.

After having moulded it upon the articulation, and covered it with gummed taffeta, bound on, with long flannel bands; then place the leg in an extension apparatus, fixing the foot. Change only every eight days. The plaster never has any odor.

Two or three generally suffice, and finally it is not dearer than the ordinary plaster, which requires to be renewed very often.—*Jour. de Chim. Med.*, and *Druggist.*

SACCHARATED LIME FOR USE IN MEDICINE—CONCENTRATED LIME WATER.

Dr. Cleland has introduced a solution of lime in syrup for use, in preference to ordinary lime water, in medicine. He prepares it as follows:—Slake eight ounces of quick lime, rub up with it five ounces of white sugar, add one pint of water, stir for some time, till the hard, stiff masses which the sugar and lime are apt to run into are as much as possible dissolved; then filter. The product should be perfectly clear, and of a slightly yellowish tint. A solution made in this way will contain eighteen grains of lime in every ounce, by weight, and altogether about 106 grains of solid matter to the ounce. Taken undiluted, a few drops are sufficient to roughen the tongue. When diluted, the taste is at first an acrid one of lime; but this is immediately replaced by a sweet taste in the back of the mouth, admitted to be pleasant. Made as just recommended, the solution is not liable to decomposition, unless it is exposed to the air. By employing a smaller proportion of water to lime, a still stronger solution may be obtained, but not with any practical advantage, as there is increased difficulty of filtration and greater tendency to decomposition. The strongest solutions are scarcely, if at all, affected by boiling, but if diluted a copious precipitation takes place on application of heat. This, however, will not serve as a test of strength, as addition of sugar in sufficient quantity will make any solution, of whatever strength, remain clear on ebullition. This preparation may be given in doses of from twenty or thirty to sixty minims or more, in a glass of water, two or three times a day.—*London Pharm. Journal.*

SYRUP OF PHOSPHATE OF IRON AND MANGANESE.

In the absence of any authorized formula for this syrup, and in answer to several correspondents, we insert the following:—

℞.—Phosphate of iron,	72 grains.
" manganese,	48 "
Glacial phosphoric acid,	ʒ vi.
Sugar,	℥ x.
Water, sufficient to make f.,	℥ xij.

Dissolve the phosphoric acid in a small quantity of water, add the phosphates, and apply heat till dissolved, then add the sugar and the remainder of the water, so that the product may measure twelve fluid ounces.—*London Pharm. Journal.*

FORMULÆ FOR SYPHILITIC AFFECTIONS.

Bichloride of mercury,	8 grammes.
Concentrated hydrochloric acid,	4 "
Spirits camphor.	8 "
Water,	1 gallon.

Dose, four to eight grammes.

Bichloride of mercury,	8 grammes.
Iodide of potassium,	180 "
Tincture of cardamon,	60 "
Water,	1 gallon.

A dose of four grammes contains one-half of a centigramme of the iodide preparation.

The *red pomatum*, much used for severe ulcerations, is made of—

Bisulphuret of mercury,	15 grammes.
Nitrate of mercury,	15 "
Creasote,	20 drops.
Lard,	480 grammes.

[*Edinburg Medical Journal.*

DOUBLE IODIDE OF IRON AND QUINIA.

Take sulphuret of barium of sufficient quantity, dissolve in hot water and filter; add, in small quantities, tincture of iodine, to precipitate the sulphate and form iodide of barium; filter, then warm to evaporate the alcohol, then add in small quantities a concentrated solution of sulphate of quinine, which forms a sulphate of baryta and iodide of quinia; filter, and then add a solution of one pint of proto-iodide of iron to three parts of water. Upon warming, the iodides of iron and quinia deposit together, and form the double iodide.

Pills.

Double iodide,	10 grammes.
Honey,	10 "
Liquorice, in powder,	q. s.

Make sixteen pills. Dose, from two to six pills a day. If used in the form of a syrup, the dose is from one to two spoonsful a day.

Much used in scrofulous affections, chlorosis, pulmonary affections, &c., and in those affections where the extract of cinchona and powdered iron are prescribed, or the iodide of iron with the wine of cinchona, being a preparation more conveniently administered.—*Bulletin Gén. de Thérapeutique.*

COMPOUND SYRUP OF PRUNUS VIRGINIANA.

By Dr. Henry Bradford, of Rock Bluffs, Nebraska.

In an epidemic influenza characterized by a profuse secretion of mucous and considerable spasmodic action, in some cases simulating whooping cough, I found the following to speedily check the disease:—

℞.—Syrup prunus virg.,	℥ iv.	
Vin. ipecac, vin. antimonii,	*aa.* ʒ ss.	
Tincture cannabis indica,	ʒ j.	
Gallic acid,	ʒ ss.	M.

Dose, a teaspoonful every three or four hours.—*Druggists' Circular.*

Editorial.

Proceedings of the New York State Medical Society.—This State Association held its fifty-fourth annual meeting at Albany on the 7th of last month. Over one hundred and fifty delegates were present, comprising many of the most distinguished physicians of the State.

The following officers, for the ensuing year, were elected:—

President—Daniel T. Jones, of Onondaga County.
Vice-President—E. H. Parker, of Poughkeepsie.
Secretary—Sylvester D. Willard, of Albany.
Treasurer—J. V. P. Quackenbush, of Albany.
Publication Committee—Thos. Hun, S. D. Willard, and Howard Townsend.

Censors were appointed for each district, also Committees of Correspondence. Names were recommended for election as permament members, and others nominated.

Nominations for Honorary Members—Dr. Braithwaite, London; Dr. Wm. Carpenter, do.; Oliver P. Hubbard, Hanover College; P. A. Jewett, New Haven; Prof. D. Crosby, New Hampshire.

For Election as Honorary Members—Alfred Stillé, Philadelphia; George Mendenhall, Ohio; J. Mason Warren, Boston; Warren Stone, New Orleans; Ernest Hart, London; B. H. Catlin, Connecticut.

Committee on Epidemics—First District, E. Hams; Second District, C. A. Lee; Third District, T. C. Brinsmade; Fourth District, A. F. Doolittle; Fifth District, Luther Luiteaw; Sixth District, A. Willard; Seventh District, E. Carr; Eighth District, H. M. Conger.

Delegates to the American Medical Association—S. Foster Jenkins, New York; Dr. Goran, Rockland; Dr. Wilbur, Syracuse; Thos. Hun, Albany; Caleb Green, Homer; Dr. Blatchford, Troy;

Dr. Brinsmade, do.; A. Clark, New York; A. L. Sanders, Madison; H. Deering, Utica; Aaron Green, New York; C. A. Lee, Peekskill; Dr. Hall, Auburn; J. F. Trowbridge, Syracuse; F. H. Hamilton, Buffalo; Daniel P. Bissell, Utica; Seth Shove, Westchester; B. Fordyce Barker, New York; Ferris Jacobs, Delaware; Joseph Beattie, Geneva; Theodore L. Mason, Brooklyn; Wm. Rockwell, New York; B. P. Staats, Albany; W. W. Strew, Queens.

Honorary Degrees of Medicine—Francis J. D'Avignon, Clinton; Harrison Teller, Brooklyn; Peter Moulton, New Rochelle.

Many valuable reports and voluntary papers were presented to the Convention, and referred to the Publication Committee.

The subject of adulterated medicines came up before the Society, and resulted in the appointment of a Committee, of which Dr. Squibb is chairman, to report upon some measure calculated to correct this growing evil. This is a movement in the right direction. But so long as there is a demand for cheap medicines will they be furnished; when the demand ceases, then will the supply cease, in a measure. It is a general complaint among many physicians that they cannot afford to use medicines of a high cost, and which solely relates to its purity and cost of preparation. This is a great mistake. The remedies they use, of a second-rate quality, fail to produce the results they wish—their reputation suffers. While, if a pure article of, perhaps, twice the cost had been employed, it would have materially advanced their reputation for skill and extended their practice. Money invested in pure medicines is to them as capital to the tradesman, or good tools to the mechanic, scarcely one of them would be found to employ the latter to construct a residence, unless he possessed not only skill, but the necessary tools to perform his contract in the best manner.

If the charges made by the country physician are not adequate to afford him a living, and compel false economy in his investments, then advance the rate 50 or 100 per cent; for there is no profession which demands so much study, investigation, science, and physical labor as this, that is as poorly paid, particularly in in the country.

A great change has taken place in ten years in respect to adulterations; a steady hand will in time work out the evil. It is a matter regulated entirely by the cupidity of man when adulteration shall cease to be profitable; then, and not till then, will it cease. The consumer must demand reliable and pure medicines; must understand whether he gets them or not, which involves a knowledge of appropriate tests, &c.; and whenever found impure, if promptly returned to the vender, will cause care in future. The subject is one which can only be worked out by beginning with the consumer, and working *backwards*—not as has heretofore been done, by constantly hammering at the adulterator with threats of exposure, but if instead, when detected by the consumer, his goods are rejected and left on his hands, it ends in total loss, and of course defeats his plans.

LONG ISLAND COLLEGE HOSPITAL, AT BROOKLYN.—This institution has been recently organized with a very efficient corps of professors, all men of talent, energy and reputation, which ought to insure a good class and success to the enterprise.

The first course of lectures will commence on Thursday, March 29th, and continue sixteen weeks.

The faculty are as follows:—

Austin Flint, M. D. (New Orleans School of Medicine), Professor of Practical Medicine and Pathology.
Frank H. Hamilton, M. D. (University of Buffalo), Professor of Surgery.
James D. Trask, M. D., Professor of Obstetrics and Diseases of Women and Children.
R. Ogden Doremus, M. D. (New York Medical College), Professor of Chemistry and Toxicology.
Joseph C. Hutchinson, M. D., Professor of Surgical Anatomy and Operative Surgery.
John C. Dalton, M. D. (College of Physicians and Surgeons, New York), Professor of Physiology and Microscopic Anatomy.
De Witt C. Enos, M. D., Professor of General and Descriptive Anatomy.
Edwin N. Chapman, M. D., Professor of Materia Medica and Therapeutics.
J. G. Johnson, M. D., Demonstrator of Anatomy.

Hydrocyynate of Iron.—Dr. John Keene, of Prince Edward's Island, N. S., says:—"I have used it with benefit in epilepsy, and in cases of neuralgia, in combination with quinine and morphine. I have found it of great benefit."

A communication from Monticello, Iowa, says:—"I have used two ounces, and my son is improving very rapidly in health."

Solidified Copaiba.—Dr. Polk, of Delaware, says:—"Solidified copaiba, in dragees, cannot be too highly praised; it seems to act better in this than in any other forms." We give this, as the question is frequently asked concerning the action of solidified copaiba compared with *it in capsules.*

The Chicago *Medical Examiner* made its first appearance last month, and is conducted by Drs. N. S. Davis and E. A. Steele. Dr. Davis was formerly editor of the Chicago *Medical Journal*, and brings to the new journal great experience in the duty he has assumed—talent and energy which cannot fail to make his journal one of practical advantage to the medical profession.

The Kansas City *Medical and Surgical Review* is the name of a new journal recently started; it is edited by Dr. G. M. Maughs and T. S. Case, and is designed for the profession in the West. We wish it a successful and useful career.

THERAPEUTICS AND MATERIA MEDICA: A Systematic Treatise on the Action and Uses of Medicinal Agents, including their Description and History. By Alfred Stillé, M. D., late Professor of the Theory and Practice of Medicine in the Medical Department of Pennsylvania College. Philadelphia: Blanchard & Lea. 1860.

Dr. Stillé has long been before the public as an author, and is favorably known in the medical literature of this continent. His writings have secured for him a notoriety and fame in the literary horizon that will characterise him as a star of the first magnitude. His Therapeutics and Materia Medica is an invaluable addition to the science of medicine, and every medical student will be amply rewarded by its study. Practitioners of medicine will find much in it new and interesting. On every page will be found ample evidence of the scholar, the careful observer, and the physician of science.

We, therefore, cheerfully recommend it to the medical profession, as one of the best standard works in the department of which it treats. It is a work of sterling value and surpassing merit.

RANKIN'S HALF-YEARLY ABSTRACT OF THE MEDICAL SCIENCES. Being a Practical and Analytical Digest of the Contents of the Principal British, American, and Continental Medical Works published during the preceding six months.

The above title explains the work fully. In it will be found a large amount of valuable information for the practitioner, classified and arranged so as to be convenient for reference.

The volume for January can be had by addressing Lindsay & Blakiston, Philadelphia. . .

KENDALL'S ANEROID BAROMETER.—At the recent lectures at Yale College, upon sciences and agriculture, Prof. Silliman, Jr., upon the subject of meteorology, devoted an hour mainly to the description of the several kinds of barometers, and gave a general idea of the isothermal lines and the distribution of cultivated crops over the continent. Of the aneroid barometer, which he deemed the most important instrument that could be placed in the hands of the farmer, he said:—

> "This admirable barometer consists merely of a tight circular brass box, the sides of which are quite thick, and the cover very thin. The cover is corrugated in circles, to give it strength. The cover is made so thin that it may rise and fall with the variations in the atmospheric pressure; and, as it has been found that with a plate of even thickness the rising and falling in will be absolutely unavoidable one time with another with a given pressure of atmosphere upon it, the inventor has arranged on the cover a combination of delicate levers touching the sides, and with a fixed point in the centre, the motions of which work a pointer around a graduated dial, or clock-face. The air has been exhausted from the box before it was hermetically sealed, and there being nothing inside to prevent the dial-plate from bending inward, it does so when the outside air becomes heavier, and, of course, springs back to its old place when that extra pressure is removed. Unqualifiedly it is the best for the farmer's use; and for the scientific man, its portability, and almost total unliability to accident, strongly recommend it. The old mercurial barometer, with its marks of 'cloudy,' 'rain,' 'fair weather,' &c., is utterly unreliable; for, the pressure of the atmosphere at divers heights is different, and the pressure that near New York rise to 'foul weather' would at a higher place, say the prairies, stand at 'fair.' And then, again, if roughly handled, air will leak into the instrument, and its value be utterly destroyed. The 'aneroid' barometer (or the 'without fluid' barometer) was first invented by M. Comte, a professor at the Ærostatical School, at Meudon, near Paris, but a Yankee mechanic, Mr. E. Kendall, at New Lebanon Springs, N. Y., has made it much cheaper, and equally reliable as the expensive French instrument. If Mr. Kendall is not a greenhorn of the first water, he will advertise it in all the prominent agricultural papers of the country."

Mr. Kendall supplies these instruments at the low price of $10, about half the cost of portable mercury barometer.

CORRESPONDENTS will oblige by writing plainly their names, town, county and State. We have, in several instances, been unable to answer letters because these are omitted. A letter from S. F. Williard, Madison, we are unable to answer, as the State is not given.

SUBSCRIBERS will please notify us if they do not receive the JOURNAL regularly.

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Indigenous Bitter Tonics.

BY CHARLES A. LEE, M. D.

NUMBER IV.

HELONIAS DIOICA.

(*Devil's Bit—Blazing Star—False Unicorn.*)

THE natural order *Melanthaceæ*, to which this plant belongs, includes numerous bulbous, tuberous, or fibrous-rooted herbaceous plants, possessing medicinal properties—most of which are acrid and virulent, though some are mild and innocuous. To it belong the *asagrea* (which yields the veratria), the *veratrum*, *colchicum* and *trillium*, as well as the *xerophyllum*, the *melantheum*, *uvularia*, and the *helonias*. All the plants belonging to the order have polygamous or dioecious flowers, with sessile leaves, more or less clasping or sheathing. The order includes twelve genera and twenty-one species in the Northern and Middle States, all of which are medicinal.

We have given the name *helonias dioica* to this plant, because it is that given to it by Pursh, and by which it is described in most botanical works. It is, however, the *chamælirium lutea* of Gray, the *C. carolinianum* of Willdenow, the *veratrum luteum* of Linneus, and the *helonias luteum* of Aiton; while the *helonias* of Gray and Michaux includes but one species, the *bullatta*, which is very rare. The *blazing star* is a smooth herb, from one to three feet high, with a wand-like stem, springing from a thick and abrupt tuberous root stalk, terminated by a long and wand-like spiked raceme of small, white bractless flowers, the fertile plant more leafy than the staminate; the leaves are flat, lanceolate, the lowest spatulate tapering into a petiole. The *helonias* derives its name from a Greek word signifying *swamp*, the place of growth. It is unnoticed in the U. S. P. It is found from New England to Georgia.

Chemical Composition.—Your recent analysis gives, of—

Organic Matters,	95.00
Inorganic Matters,	5.00
Total,	100.00

Gum,	0.811
Albumen,	4.142
Starch,	6.681
Extractive,	11.483
Bitter Principle,	9.501
Coloring Matter,	13.657
Oleo-Resin, insoluble in alcohol,	2.742
Soluble Salts,	4.221
Insoluble Salts,	0.779
Lignin, &c.,	45.985
Total,	100.000

This analysis shows that the plant belongs to the class of pure simple bitters, containing neither volatile oil (except in combination with resin), nor tannin, nor gallic acid. It differs, however, from several of the same class, in containing no sugar, more starch, and less gum.

Therapeutical Properties.—The *blazing star* has long been employed in popular practice in many parts of the United States as a bitter tonic, anthelmintic, and emmenagogue. In Ohio and many of the Western States it is in very general use as a common emetic, operating with great certainty, but more activity than the ipecacuanha or the eupatoreum. The root being the only part employed, numerous trials have satisfied us that it has a specific action on the uterine organs—an alterative, regulating influence over their functions. Hence in amenorrhea, marked by general atony and an anæmic and torpid condition of the system, this plant proves of great service: giving tone to the digestive organs, favoring nutrition and sanguification, and promoting the secretions generally. So also in leucorrhea, associated with a similar condition of the general system, it will be found equally serviceable. Its influence as a uterine tonic is also well marked in cases of atonic or passive menorrhagia. Here, by imparting tonicity to the muscular fibres of the organ, and by a stimulating power over the plexuses of organic nerves which supply the pelvic viscera, the exudation of blood is checked, and the predisposing as well as proximate cause of the disease removed. If it has the power of obviating sterility and impotence, as alleged by some writers, it must be by a similar mode of operation. It may be slightly aphrodisiac, but there are no well-attested facts bearing on this point. It is very probable, however, that it may, in common with senecio and other uterine tonics, produce such effects; but if it does, I have no proof of the fact, except what may be drawn from analogy. It is very probable, also, that in cases of dysmenorrhea and liability to abortion from atony of the reproductive organs, it may prove highly advantageous by a similar mode of action, just as we find in the case of iron and other tonics which improve the general health. But, in addition to this, it would seem to be endowed, to a considerable extent, with specific properties and powers.

As a *simple bitter*, this plant ranks among the most valuable of its class. From its botanical affinities, which ally it so closely with the veratrum, it might be supposed to possess highly acrid and irritant powers; but experience proves that no such effects are observed when given in ordinary and appropriate doses. As a simple stomachic tonic, it will be found not only wholly unobjectionable, but highly useful. It has been used in many cases of general dropsy with marked success, particularly in persons of lax habit, broken constitution, and general debility. The results are doubtless partly due to the increased tone imparted to the capillary system, and partly to its stimulating the absorbent function, an effect common to it and other bitter tonics. It would seem, however, to possess, in addition, decided alterative and deobstruent properties: influencing secretion and excretion to a greater extent than tonics generally. Whether it has any specific emetic powers may well be doubted; further trials are needed to settle this point. All bitter vegetable infusions, given freely, will cause emesis, as boneset, chamomile, &c. That it has any true anthelmintic or vermifuge properties remains also to be ascertained, or, at any rate, more than it enjoys in common with all simple bitters. After worms have been evacuated, it is an excellent corroborant to prevent their return, but no better than gentian, buck-bean, or gold thread. In atonic dyspepsia, convalescence from fevers and other acute diseases, the latter stages of dysentery, &c., this plant has proved of decided benefit in numerous cases.

Preparations and Administration: Infusion, decoction, fluid extract, solid extract, powdered root, helonin, tincture, syrup, wine.—The *infusion*, made with cold water (one ounce to a pint), contains all the active principles of the root, except the resinous matter, and may be used with advantage, although the bitter taste might in some cases prove objectionable. The *decoction* is liable to the objection already stated, viz: the oxidation and decomposition of the organic constituents. The *fluid extract* is, perhaps, generally to be preferred, combining as it does all the active principles in a very concentrated form. This is now kept in the shops, and may be procured of any of the agents of Tilden's preparations. Dose, one to three drachms. The *solid extract* has the advantage of the pillular form, and of being readily combined with other medicines. The *powdered root* is seldom employed. The *helonin* of Tilden's preparation is the *oleo-resinoid* matter in combination with the *bitter principle.* It is a deep brown granular substance, resembling very dark-colored maple sugar. It is very bitter to the taste, with no acridity, and wholly soluble in the mouth. It is also mostly soluble in cold water, but not in alcohol, and is a very eligible preparation. Mixed with water it forms a blackish-green opaque solution of great bitterness. The *helonin* of B. Keith & Co. is the powdered root mixed with common salt and the pulverized hydro-alcoholic extract. Mixed with water a great portion remains undissolved, forming a light yellowish mixture, and slightly bitter to the taste. Compared with Tilden's preparations of the same name, it is nearly inert. The average dose of pure *helonin* is about one-half a grain, of Keith's preparations three grains. The eclectics advise its combination with hydrastin, myricin, senecin, leptandrin, ampelopsin, iron, podophyllin, digitaline, sanguinarin and xanthoxylin, according to the existing indications. These compounds, however, are recommended chiefly on theoretical grounds, and not from any actual results derived from their use. That some of these combinations, however, may prove useful in certain cases, is highly probable, especially when the preparations are reliable.

HYDRASTIS CANADENSIS.

(*Orange Root—Yellow Puccoon—Yellow Root—Ground Raspberry—Golden Seal—Turmeric Root, &c.*) Natural Order, *Ranunculaceæ;* Sexual System, *Polyandria Polygamia—the Root.*

The *hydrastis*, a plant peculiar to North America, of which but a single species is known, is a low, perennial herb, sending up in early spring, from a thick and yellow, knotted rootstock, a single radical leaf, and a simple hairy stem, which is two-leaved near the summit, and terminated by a greenish-white flower. It abounds in rich woods throughout most of the United States. Its leaves are rounded, heart-shaped at the base, five to seven-lobed, doubly serate, and when full grown in summer from four to nine inches in width. The root is perennial, of a bright yellow color, tortuous, rugged, and with many long fibres. The stem is about one foot high; the flower single, and white or rose-colored. The fruit is a berry of a red color, resembling the raspberry, formed of many oblong granulations, each of which contains one or two obovate seeds of a black color, having a minute embryo at the base of a fleshy and oily albumen. The flowers appear in April and May, and are short-lived, the petals falling off soon after they expand. The root of this plant has been used from time immemorial by the Indians as a dye, as well as for medicinal purposes. It dyes silk, wool and linen a brilliant yellow color, which is said to be permanent, and by adding indigo a rich blue is produced. It is somewhat remarkable that this root has not more generally been employed in the arts. It has a strong, somewhat narcotic odor, and very bitter taste.

Chemical Composition.—Tilden's analysis of the root of hydrastis yields—

Organic Matter,	89.168
Inorganic Matter,	10.832
Total,	100.000

Gum,	6.05
Albumen,	5.22
Starch,	5.04
Extractive,	3.57
Sugar,	7.23
Fixed Oil,	2.88
Coloring Matter, or yellow Bitter Extractive,	7.65
Particular Matter,	4.42
Resin,	2.77
Soluble Salts,	2.53
Insoluble Salts,	2.30
Lignin, &c.,	44.34
Total,	100.00

The bitter principle, *hydrastina*, when pure, is either in the form of crystals or an amorphous powder of a bright yellow color, resembling chromate of lead. It is entirely soluble in alcohol, water and alkaline solutions, insoluble in ether, and has a very bitter taste. It may be distinguished from the various extracts of the plant by its beautiful yellow color. The alcoholic extract, for example, is of a brownish-yellow, resembling the powdered root—partially soluble in water, soluble in alcohol. As the alcoholic extract contains both *hydrastina* and the oleoresin, water only dissolves the former. One hundred parts give of hydrastina 30.25; resin, &c., 69.75=100. The color and properties of the hydro-alcoholic extract are the same as the alcoholic extract, containing less resin, but about the same per cent of *hydrastina*. The color of the aqueous extract is brighter than that of the alcoholic or hydro-alcoholic extract, and contains about the same amount of *hydrastina*, without any resin, but mixed with gum, starch and extractive matters. Besides the *alkaloid*, hydrastina, the root contains a *resinoid*, *hydrastin*, and a *neutral* substance, also called hydrastin.

Therapeutical Properties.—As a powerful tonic bitter, the hydrastis takes rank among our most valuable indigenous plants, and is well adapted to all cases where such remedies are indicated. It has been extensively employed of late years, both by botanic and eclectic physicians and by regular practitioners; and there is a very general concurrence of opinion that, while it exercises a specific influence over mucous surfaces, it acts upon the hepatic function as a cholagogue, and upon the glandular system generally as a deobstruent. It must be remarked, however, that the resinoid extract, hydrastin, obtained by the solvent action of alcohol, differs essentially in its effects from the alkaloid, hydrastina, proving highly irritant and stimulating, while the latter acts chiefly as a simple bitter only. In inflammatory or irritable conditions of the gastro-enteric surfaces, the former preparation will therefore be found objectionable. The resinoid, indeed, has been considered so powerfully irritating as to be recommended by some botanic physicians as an escharotic. However this may be, the infusion, watery fluid and solid extracts, and the alkaloid, will be found free from this objection. Where a general deobstruent and alterative effect is desired, an alcoholic or hydro-alcoholic preparation should be selected.

The cases in which we have known this plant used with most success were atonic dyspepsia, attended with torpidity of the liver, languid circulation, and constipated bowels. It seemed to quicken the portal circulation and excite the hepatic function in a very decided manner. The mucous secretions generally were at the same time increased, while the digestive organs assumed a more healthy condition, as evinced by the increase of appetite, and the removal of acidity, flatulence and eructations. We are also satisfied of its useful alterative effects in scrofulous and chronic cutaneous affections, proving laxative to the bowels, and at the same time influencing the secretions generally. In chlorotic amenorrhea it has also proved a very successful remedy in combination with some of the chalybeates. The resinoid, in union with iron (by hydrogen), will be, perhaps, the most eligible. In cases of general debility, and at the stage of convalescence, the alkaloid, hydrastina, in pill, has been found useful, increasing the appetite and promoting nutrition, while it has no tendency to check the action of the glandular organs. It has been used to some extent in intermittent fevers, especially when associated with torpidity of the liver, and, it is said, with very marked success. There is no proof, however, that it possesses any greater antiperiodic power than the bitter tonics generally, though, from its deobstruent properties, it may be better suited to such cases than articles which are destitute of such powers. Some eclectic practitioners place great reliance on it in cases of chronic cystitis and gravelly affections: giving the resinoid in small and oft-repeated doses. It may well be doubted, however, whether it exerts any specific influence over the genito-urinary organs. As a general alterative, it doubtless may exert an important curative effect in this class of diseases. The same remark will apply to its use in leucorrhea and chronic urethritis from gonorrheal virus. It is unnecessary to speak of the principles which should guide us in combining this with other remedies, as they are the same as should influence all medicinal combinations. These have been so fully stated and illustrated by Dr. Paris as to need no additional elucidation. To his "Pharmacology," therefore, we refer the reader for all that can be said on this subject. As to the local applications of this remedy, we have little personal experience; but we are informed that it has been usefully employed as an injection (ʒj. of the neutral or alkaloid to one pint of boiling water) in gonorrhea, gleet, leucorrhea, chronic cystitis, &c.; while it is also recommended to be snuffed up the nostrils in chronic catarrh, applied as a wash in opthalmia, and an injection in otorrhea. For such purposes we doubtless have far better remedies than this. Its legitimate uses are such as have been above indicated.

Preparations, Doses, &c.: Infusion, decoction, powder, fluid and solid extract, hydrastin (resinoid), hydrastin (neutral), hydrastina (alkaloid), tincture, syrup, compound tincture, lotion, compound infusion.—Of these, the fluid and solid extracts and hydrastina are preferable as simple tonics; as alteratives, emmenagogues, or cholagogues, the neutral, resinoid, or tincture are to be chosen. The dose of the fluid extract is from half to two drachms; of the solid extract, two to five grains. The hydrastin and hydrastina are administered in doses of from one to three grains. Of the tincture, made with ℥iij. of the fluid extract to one pint diluted alcohol, half an ounce is the ordinary dose. The compound infusion, which is recommended as a gargle in various forms of sore mouth and ulcerated sore throat, is made of ℥ss. each of the fluid extract of golden seal, blue cohosh, and witch hazel, with ʒj. alum, ʒiij. honey, and one pint of water. An elegant stomachic bitter may be prepared by adding one drachm of hydrastina to one pint of Sherry or Madeira wine, of which a dessert spoonful would be a dose.

POLYGÁLA RUBELLA (*Bitter Polygala*).

(Natural Order, *Polygalaceæ;* Sexual Systems, *Diadelphia—Octandria.*)

The *Polygalaceæ*, or *Milkwort Family*, to which this little plant belongs, includes, within North America, two genera, *polygala*, with two species, and *krameria*, with one, all the former endowed with active medicinal properties. Of these, the *polygala senega*, or *senega snakeroot*, is best known, and in most general use. The name of the genus is derived from two Greeks words signifying *much* and *milk*, from a fancied property of its increasing this secretion. Plants belonging to this order are both herbaceous and shrubby, having entire and alternate leaves, without stipules, and often verticillate at the lower part of the stem. The flowers are in racemes or terminal spikes, and generally small. The roots are bitter and sometimes milky. Representatives of the order are found in almost all parts of the world, and everywhere they are considered as medicinal—some being bitter tonics, others expectorant, emetic, cathartic, diaphoretic, diuretic, emmenagogue, saponaceous (used for soap), and highly poisonous.

The *polygala rubella* of Willdenow and Bigelow is the *P. polygama* of Walter, Torrey and Gray, and others. Its stems are numerous, and spring from a biennial root, mostly simple, angular, ascending, very leafy, six to nine inches high, with oblanceolate or oblong leaves; terminal raceme, many flowered, purple, with eight stamens; radical flowers racemed on short runners on, or beneath the ground. Bigelow has drawn attention to this peculiarity, which is found also in several other species of rubella, where a part of the fruit is produced by a kind of imperfect flower growing close to, and, in some instances, under the ground. The plant is found in dry, sandy fields and woods, from Canada to Louisiana, flowering in June and July. The root is somewhat fusiform and branching.

Chemical Composition.—Analysis shows the usual organic constituents of the simple bitter plants, as gum, albumen, starch, sugar, bitter principle (neutral and resinoid), soluble and insoluble salts, lignin, &c. There is a small amount of resinoid matter, but the active bitter principle is wholly soluble in water, both hot and cold.

Therapeutical Properties.—The *P. rubella* is very similar to the *P. amara* of Europe, which has long been regarded as one of the most valuable bitter tonics. Paulus, Dioscorides, Galen and Pliny speak of it as a remedy for exciting the lacteal secretion. The Arabian writers have, as usual, only copied the Greek and Latin writers in relation to its medical properties. Bigelow speaks of the P. rubella as extremely bitter, and as a useful tonic and stimulant to the digestive organs, acting as a laxative and diaphoretic in large doses. It seems to be a pure, simple bitter, acting as a stomachic tonic in small doses, and as a sudorific and cathartic in large doses. Several other species of the plant have the same properties.

Preparations.—The same as the other bitter tonics already described. The infusion should be made with two ounces of the root to a pint of water. The dose of the powdered root is about one scruple; of the fluid extract, one drachm.

ALETRIS FARINOSA (*Mealy Starwort*).

(*Star Grass—Blazing Star—Aloe Root—Bitter Grass—Unicorn Root—Ague Root—Ague Grass—Star Root—Devil's Bit—Cole Root.*) Natural Order, *Hæmodoraceæ* (*Bloodwort Family*); Sexual System, *Hexandria—Monogynia.*

The *Bloodwort Family*, so called from many of the plants belonging to it having a red juice, includes but three genera within the United States, viz: *lachnanthes*, *sophiola*, and *aletris*, each of which, except the last, has but a single species, but all have the same bitter tonic qualities. It has representatives, however, in every quarter of the globe; generally large herbaceous plants, with fibrous, perennial roots, and permanent, uniform leaves, mostly in two ranks. The *A. farinosa* is found in most parts of the United States, in fields and about the borders of woods, and flowers in June and July. The stem is from one to three feet high, invested with remote scales; the leaves, six to twelve in number, spread close to the ground, in a radiated manner like a star, and are sessile, nerved, lanceolate, and smooth. The flowers, which are white, form a slender, scattered spike, with very short pedicles and no calyx. The flower has a roughish, mealy appearance, by which the name was suggested. The root is perennial, small, black outside, brown inside, ramose, and crooked. For a more particular description, see Bigelow and United States Dispensatory. The genus, which is peculiar to North America, includes two species. The *A. aurea* differs from the *A. farinosa* in having yellow, bell-shaped flowers, with short, ovate lobes, while those of the latter are white and oblong;tubular, with lanceolate-oblong lobes. Both species are more common at the South than at the North; and Rafinesque states that the *aurea* is found only in the Southern States. It flowers in June and July. In sensible as well as medicinal properties both species closely resemble each other.

Chemical Composition.—Your recent analysis of the root of this plant gives the following results:—

Organic Matters,	95.833
Inorganic "	4.167
Total,	100.000

Gum,	4.066
Albumen,	0.290
Starch,	1.371
Extractive,	2.395
Sugar,	2.036
Coloring Matter,	12.688
Bitter Principle,	7.074
Resin,	4.566
Soluble Salts,	0.448
Insoluble Salts,	3.719
Lignin,	61.547
Total,	100.000

Analysis thus shows the root to contain the usual constituents of the bitter tonics, and a larger quantity of resinoid matter than is found in any of the others. It also contains a larger amount of bitter extractive. The tincture is more bitter to the taste than the infusion, and assumes a milky, turbid aspect on the addition of water. The per-salts of iron cause little or no change, showing the absence of tannin or gallic acid. To the resinoid the name *aletrin* may be given.

Therapeutical Properties.—It is believed that no American plant exceeds the aletris in intense and permanent bitterness. In this respect it is not inferior to aloes or quassia. It seems to be a pure bitter, having also some emetic and cathartic properties. As a tonic stomachic, it is not surpassed by any of our indigenous plants, and for this purpose it is extensively employed as a popular remedy, and in regular practice. It has long been held in high repute among the Indians. There is some reason to believe that it possesses narcotic properties. Rafinesque, who seems to have experimented a good deal with it, says that "only small doses must be used, because large ones produce nausea, dizziness, and narcotic effects," and that the powdered root should not be given in a larger dose than twelve grains. Its uses are the same as those of gentian and quassia. In some parts of the country it is used by botanics as a remedy for dropsy, dysentery and colic. We regard it as an alterative tonic, very similar to hydrastis. It deserves a more particular investigation.

Preparations.—The same as the other pure bitters. The infusion and tincture have been more generally employed. The *fluid extract* is prepared by the Tildens, and is an excellent stomachic, in doses of ten drops. The *aletridin* is given in pill, in doses of two to three grains. The *infusion* may be prepared by adding two ounces of the fluid extract to one pint of alcohol, the dose of which is about half a drachm. The *tincture* can be made of the root or the fluid extract, the latter in the proportion of ℥ iij. to one pint of alcohol. Dose, thirty drops. The syrup is prepared with one ounce of the fluid extract to one pint of syrup. The solid extract is made into pills, of one or two grains each.

SABBATIA ANGULARIS (*American Centaury*).

(Natural Order, *Gentianaceæ;* Sexual System, *Pentandria—Monogynia.*)

The American centaury has an erect, angular and winged stem, one to two feet high, with ovate, acute, amplexicaul leaves; root biennial, yellow and fibrous. The stem has opposite branches, forming a smooth, angular corymb, with membranous wings at the angles. The flowers are terminal, numerous, and of a rich rose color, nearly white in the centre. This plant is very common in meadow grounds in most parts of the United States, flowering in August and September. The whole plant is extremely bitter to the taste, and is officinal, yielding its virtues to alcohol and water.

Chemical Composition.—Tilden's analysis of this plant shows it to contain, of—

Organic Matters,	94.166
Inorganic "	5.834
Total,	100.000

Albumen,	1.723
Gum,	1.757
Starch,	4.580
Extractive,	5.714
Bitter Principle,	5.270
Sugar,	1.942
Coloring Matter,	1.142
Chlorophylle,	5.058
Resins,	4.870
Soluble Salts,	1.682
Insoluble Salts,	4.152
Lignin,	62.110
Total,	100.000

The usual constituents of the simple bitters are thus found in the sabbatia, without any astringent matter, and slight aroma. It contains a neutral principle (*sabbatin*) besides the bitter principle and extractive, both soluble in water.

Therapeutical Properties.—The entire plant has a very bitter taste, with slight aromatic flavor, neither unpleasant to the taste nor offensive to the stomach. It is much employed as a stomachic, and also in the milder grades of intermittent and remittent fever. Chapman says it has the advantage over the Peruvian bark of being susceptible of employment in every stage of these diseases. It has also been much used as an emmenagogue and vermifuge. As a pure bitter tonic it takes rank among the very best.

Preparations.—The usual mode of administration is the cold infusion, made with ℥ i. to a pint of boiling water. Dose, a wineglass full.

The fluid and solid extracts of the centaury, as of other vegetables, possess some advantages over all other preparations. The tincture forms a good stomachic. The powder may be given in doses of a few grains.

Iron and Its Preparations.

[CONTINUED.]

FERRI OXIDUM HYDRATUM (*Hydrated Peroxide of Iron*).—This preparation has found its way into universal use as the antidote to white arsenic. Dr. Bunsen, of Gottingen, had, previous to 1834, made frequent experiments with it, which satisfied him that it was an efficacious agent, but, along with Dr. Berthold, he subjected it to a fresh examination. The results of their investigation were published, and since then it has received attention everywhere. It should be given in the form of magma, a soft and pulpy state. It forms with arsenious acid the arseniate of the protoxide of iron. $Fe_2O_3 + AsO_3 = Fe_2OAsO_5$.

Messrs. Bunsen and Berthold, from the results they have obtained, recommend this oxyhydrate as the chief antidote in all cases of poisoning by arsenic; and they advise emetics to be associated with it along with the agents hitherto employed—first, when the quantity of the poison taken has been considerable, and therefore a very large quantity of the antidote is demanded; secondly, when, at the same time, substances containing tannic acid, as infusion of green tea, or sulpho-hydric acid developed after the eating of eggs, may be suspected in the alimentary canal, as these substances are closely related to the antidote, and may weaken its action; and thirdly, when, prior to taking the poison, the stomach has been overloaded with food, and is therefore capable of receiving only a small portion of the antidote. But, whether vomiting be excited or not, recourse must be had to the oxyhydrate as speedily as possible. Tepid mucilaginous drinks may also be given to envelope the particles of arsenic that may exist in the compartments of the stomach. If the quantity of the poison taken be unknown, the antidote may be administered in a considerable dose; and if the patient should vomit, it may be given afterwards in smaller quantity.

But, if no vomiting should arise, it is recommended that he should continue to take the oxyhydrate until the arsenite of iron formed has had time to pass into the intestinal tube; and even after this, it may be persevered with in small doses for a time, as portions of arsenic may possibly remain behind unchanged. With the same view, the oxyhydrate may be thrown up in the form of a clyster, whenever it is presumable that the compound, formed by the oxyhydrate and the arsenic, has reached the lower portion of the bowels. To aid this cathartics may be administered. Of these, castor oil, which would first suggest itself, might interfere, it has been conceived, with the operation of the antidote. Sulphate of magnesia, or any of the neutral salts, should have the preference.

As recommended in the Pharmacopœia of the United States, the hydrated oxide should be kept in the shops ready mixed with a definite quantity of water, in order that it may be always on hand so as to be administered without delay; and the recommendation is good. Even if not trusted to alone, the evidence is quite sufficient to show that it ought to be regarded as an important element in the treatment of every case in which arsenic has been taken.

It has been found, experimentally, that to thoroughly precipitate one part of arsenious acid, within five minutes, by the hydrated peroxide, twenty-two parts of the latter are needed. In the uncertainty as to the precise quantity of poison that has been taken, it has been recommended that to an adult a tablespoonful, and to children a dessert spoonful, should be given every five or ten minutes, until relief from the urgent symptoms is obtained.

FERRI NITRAS (*Nitrate of Iron*).—This preparation greatly resembles solution of chloride of Iron in its medicinal properties. It is held that to its astringent power it unites that of diminishing the irritability and tenderness of the mucous membranes with which it comes in contact. It has proved of great value in chronic diarrhea, but is not applicable where ulceration of the bowels is present. In diarrhea and other affections of the mucous membranes accompanied by discharges; in chronic diarrhea, depending mainly on an excess of sensibility of the organic nerves which supply the digestive tube; in leucorrhea, occurring in such as are pale, exsanguious, feeble and languid; in cases of aphthous sores; in the diarrhea and intestinal hemorrhage of typhoid fever; in urticaria, and in the treatment of intermittent fever, it has been used by various physicians, and its efficacy is attested to with great confidence.

It is, doubtless, a powerful astringent, but it is questionable whether it possesses any advantage over the tincture of the chloride of Iron.

Ferri Carburetum (*Carburet of Iron, Graphite*).—This well-known substance was formerly considered to be slightly astringent and desiccative; but although it has been received into the various Pharmacopœias of continental Europe, it has never been recognized as a therapeutical agent in this country or in Great Britain.

According to Weinhold, the internal use of graphite produces no perceptible change on the organic functions, except that, under its protracted use, the urinary secretion is augmented, and a disposition to micturition excited. He found, however, that in herpetic and other cutaneous affections it occasioned a very favorable modification in the eruption, and wholly removed it. He employed it as well internally as externally. The urine, he asserts, after its administration, commonly began to make a deposit, and this continued until some change in the cutaneous affection announced its approaching cure.

Internally, graphite is given in doses of from five to fifteen grains, from two to four times daily, and the dose may be augmented, according to circumstances, to a drachm in the day. It is given in powder or in the pillular form. Externally, it is applied in the form of ointment or plaster—from ʒ ii. to ʒ vi. of the graphite to an ounce of the constituent.

POWDER OF CARBURET OF IRON.

℞.—Carburet of Iron,
White Sugar, - - - - - - - *aa.* ʒ ss. M.

Divide into six equal parts. Dose: one every two hours, in lichen leproides.—*Von Hildenbrand.*

ELECTUARY OF CARBURET OF IRON.

℞.—Ferri Carburet, - - - - - - - ℥ ss.
Mellio Despumat., - - - - - - ℥ ii. M.

Dose: a coffeespoonful, morning and evening.—*Weinhold.*

PILLS OF CARBURET OF IRON.

℞.—Ferri Carburet.,
Ext. Dulcamar., - - - - - - *aa.* ʒ j. M.

Make sixty pills. Dose: six, three times a day.—*Marker.*

OINTMENT OF CARBURET OF IRON.

℞.—Carburet of Iron,	ʒ ii.	
Oxide of Zinc,	ʒ ss.	
Lard,	℥ j.	M.

[*Mayer.*

℞.—Carburet of Iron,	
Sulphur,	*aa.* ʒ ii.
Lard (to make ointment),	q. s.

[*Brera.*

Arnica.

(ARNICA MONTANA—LEOPARD'S BANE.)

ARNICA is a hardy, perennial herbaceous plant, a native of the northern parts of the Continent of Europe and of Siberia. If it possesses any peculiar habitude, it is the selection of shady situations in meadows and mountainous places, from the sea-shore to the limits of eternal snow. It flowers in June or July. The *leaves* have a pleasant aromatic odor, and excite sneezing; their taste is somewhat aromatic, bitter and pungent. The *root* is bitter and acrid. The flowers have a peculiar smell and a penetrating acrid, bitter, and somewhat nauseous taste. The flowers only are officinal in medicine, although the roots and other parts are possessed of medicinal properties.

Both the root and flowers contain a volatile oil, which is said to exist most abundantly in the root, while both contain *arnicin* in about equal proportion.

According to the analysis of MM. Chevallier and Lassaigne, the flowers contain a *resin*, having the odor of the flowers; a bitter, nauseous matter, resembling *cytisine;* gallic acid, yellow coloring matter, albumen, gum, muriate of potassa, phosphate of potassa, a trace of sulphur, carbonate of lime, and a trace of silex.

Arnica is known to have been employed in Europe as early as the sixteenth century. It was first mentioned by Tabernæmontanus, one of the most eminent botanists of the sixteenth century. He states that it was a popular remedy among the Saxons for bruises and other injuries with extravasation of blood, and for the cure of obstinate intermittents, rheumatic pleurisy, and other affections in which pure stimulants are commonly employed. The publication of the work of Collin, in 1773, attracted much attention to its use, particularly among the German physicians. He employed it successfully in paralysis, amaurosis, putrid or typhoid affections, and in diarrhœa of phthisis. In England and France it is quite extensively employed at present; in the United States its use is increasing, and the confidence reposed in it by the practitioners of Germany, and the strong expressions in its favor by the most enlightened medical authorities of that country, entitle it to a thorough trial, even though their praises may be considered extravagant.

The reason why it has not been used more by American practitioners may be the inferiority of the article employed—that used here having deteriorated by age, while that employed in Germany is fresh. This, however, to a great extent, may be overcome by comparison of the German preparation with that made here from the imported flowers; a careful analysis of both, and the importation of fresh flowers from the places of their growth. These precautions will produce a preparation in which little or no difference will be observable.

Many efforts have been made to procure the seed of the Arnica Montana, with a view to its cultivation here, but as yet without success. The presence in this country of the species, arnica chamissonis, found by Dr. Newberry, botanist of the Pacific Railroad survey, on the shores of Klamath Lake, Oregon Territory, and the arnica mollis, at Crater Pass, near the snow line, gave rise to a belief that the Arnica Montana was indigenous to that country, which is not the case. The latter variety has been found in moist places on the White Mountains of New Hampshire, and on mountains of New York near the sources of the Hudson River.

The local action of arnica is that of an irritant. Taken internally it occasions a sense of irritation and burning of the throat, nausea, sometimes vomiting, gastric pains, and loss of appetite. The active principle, taken into the system, augments the heart's action, quickens the respiration, and promotes diaphoresis and diuresis. It appears to increase the bronchial secretion also, and occasions headache, giddiness, &c. If the dose be large, or an overdose, all of the functions are quickened, but dullness and a sense of weariness ensue; sometimes the brain and spinal marrow are peculiarly affected, twitchings and involuntary motions of the extremities generally preceding other effects on the nervous system. These effects generally pass off soon, without leaving any derangement of the system, provided the dose be not too large.

Dr. Wood, in an essay upon Arnica, says:—"Perhaps the most useful practical application of the medicine is the treatment of the different forms of fever in which the typhoid condition exhibits itself. When, in these complaints, the patient falls into a state of mental indifference or prostration, with diminished sensibility and a disposition to sleep; when the pulse is soft and feeble, the vision dull, the eyes turbid, the teeth, lips and tongue encrusted with sordes, the skin bathed in a cold, clammy sweat, or marked with petechiæ; in fine, when the evidences are presented of a general failure of the vital powers, Arnica is habitually resorted to, and, as is asserted, with the effect of supporting the energies of the system and favoring the resolution of the disease. It is, however, almost always, in such cases, given in combination with the diffusible stimulants or antispasmodics, such as valerian, camphor, musk, ether, &c." Voigtell used the root in typhus fever, and in some cases prefers it to the flowers. He considers this remedy peculiarly applicable to cases of great sluggishness of the abdominal viscera, indicated by tympanitic swellings, looseness of the bowels, fetid discharges of air, eructations of air, and a sense of weight and abdominal distention. In connection with its use he applies spirituous embrocations or spice poultices to the abdomen, volatile stimulants internally, and Peruvian bark.

Stoll gave it in "putrid fevers," when there was no inflammatory complication and the pulse was natural, while the strength and all the animal functions were much depressed; also when the tongue was dry or covered with an abundant and foul mucous, or when the patient was dull, sluggish and deaf, with muttering delirium, he generally preceded it with an an emetic. It usually gave rise to flatulence and colic, but lessened the stupor and, in most cases, excited nausea. Its similiar use is confirmed by Collin and Hildebrandt. Stoll also particularly recommended it in symptomatic and colliquative diarrhœa of low forms of fevers, and is stated to have cured patients reduced to the last extremity by hectic fever, colliquative sweats and diarrhœa; from suppuration, and who had previously taken large doses of bark in vain; so that he remarked: "With its aid I did not despair when all seemed desperate." According to Dr. Stillé, "Stoll vaunted this remedy in certain intermittent fevers, which he used in the form of an electuary. It generally produced severe pains in the stomach, with a copious, viscid perspiration, a full, slow pulse, and constipation of the bowels. He allayed gastric symptoms with opium. This method, he states, transformed triple into double quartans, and these into simple quartans, which disappeared without relapse. In the epidemic and typhoid form of *dysentery*, he declared he knew of no remedy more justly entitled to be called a specific."

At another time I will speak of it, as employed by Richter and others, and of the preparations of it. A.

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Atropia in Incontinence of Urine.

By A. F. Pattee, M. D., of West Amesbury, Mass.

After observing the effects of belladonna in incontinence of urine, so highly spoken of by many writers in different medical journals, the writer was induced to try the alkaloid principle, Atropia, knowing that the effects produced upon the system are exactly those of belladonna, only that they are relatively more powerful, while the extract and tincture often require a much increased dose, and often fail to produce the desired effect.

The dose can be more easily managed, and danger from poison avoided. It can be given in solution, with but little observable taste, which is of much advantage when given to children.

Before giving the Atropia, attention should be given to the alimentary canal—correcting all irregularities, so far as possible. We often find some tenderness of the spinous processes of the dorsal and lumbar vertebræ, which should be rubbed twice daily with some stimulating liniment. The diet should be plain and unstimulating; water or slippery-elm bark tea for drink.

I have prescribed the Atropia in thirty cases, four of which were of long standing, and had been under treatment for a long time, a diversity of remedies having been used. All were completely cured, in a period of from six to fifty days.

The one-fortieth of a grain was given, three times a day, to adults, in solution, until the usual symptoms of belladonna is produced—that is, dilatation of the pupils and dryness of the fauces. The solution can be made as follows:—

℞.—Atropia,	gr. i.	
Aqua Destill.,	℥ v.	
Acetic Acid,	gtt. vi.	M.

Dose: one drachm, three times a day—morning, noon and night—increasing or decreasing as occasion may require. For children, the dose must be graduated in proportion to their ages.

Pepper.

(PIPER NIGRUM.)

PIPER NIGRUM is a perennial plant, a native of the East Indies, and is much cultivated in Malabar, Java, Borneo, Sumatra, and the Philippine Islands, whence the whole of Europe is supplied. It grows in the greatest abundance in the province of Malabar, and constitutes one of their principal articles of export. One thousand plants yield five hundred to one thousand pounds of Pepper. The plant begins to bear about the third year, and is esteemed in its prime about the seventh, which state it maintains three or four years; it then gradually declines for about the same period. The vines generally yield two crops annually—the first in December, the second in July. As soon as the berries redden the bunch is considered fit for gathering. When gathered, they are spread on mats in the sun. In this situation they become black and shrivelled, and, as the Pepper dries, the grain is separated from the stalk.

Pareira states that three kinds of black Pepper are distinguished by dealers. Malabar is the most valuable; *Penang* is larger and smoother, and used for the manufacture of white Pepper; and Sumatra is the cheapest sort. Fulton's decorticated Pepper is black Pepper deprived of its husk by mechanical trituration.

A variety known as bleached Pepper, or English bleached Pepper, is Penang Pepper bleached by chlorine, by which process undoubtedly a portion of the active properties of the berry is lost.

Black Pepper is subject to great adulterations in the ground state. According to Hassall, out of forty-three samples examined in 1851, nearly one-half were found to be adulterated. The substances were found to be *linseed meal*, *mustard husk*, *wheat flour*, *pea flour*, sage, rice flour, pepper dust, ground gypsum, or crystallized sulphate of lime. Before the Committee upon Adulterations, the Commissioner of Excise stated that in twelve years he had examined 1,116 samples, of which 576 were adulterated. The stock material for adulterating Pepper is the husks of red and white mustard seeds, and linseed meal warmed up with Chilis.

Some years since it was not uncommon to meet with artificial Pepper corns. Accum writes:—"I have examined large packages of both white and black Pepper, by order of the Excise, and have found them to contain about sixteen per cent of an artificial compound, composed of oil cake, the residue of linseed from which the oil has been pressed, common clay, and a portion of Cayenne Pepper, formed into a mass, and granulated by being pressed through a sieve and then rolled in a cask." All suspected Pepper should be soaked in water. Should it contain artificial Pepper corns they will become disintegrated and fall to pieces.

The active properties of Pepper depend upon the presence of an *acrid resin*, a volatile oil, and a crystallizable substance called *piperine*. As analyzed by Pelletier, it contains—1st. Piperine; 2d. Green, concrete, very acrid oil; 3d. Thick volatile oil; 4th. Colored gummy matter; 5th. Extractive; 6th. Malic and tartaric acids; 7th. Bassorin; 8th. Earthy and alkaline salts; 9th. Woody fibre.

The *resin of Pepper* is a very acrid substance, soluble in alcohol and ether, but not in the volatile oils. It possesses, in high perfection, the acrid properties of the Pepper, and has been employed in intermittents with success. The volatile oil, when pure, is colorless; it has the odor and taste of Pepper; it absorbs hydrochloric acid in large quantity, but does not form a crystalline compound with it. According to Meli, it possesses the same febrifuge properties as piperine.

Piperine was discovered by Œrsted in 1819, but was more accurately examined by Pelletier in 1821, and later by Dr. Christison. It is obtained by treating Pepper with alcohol, evaporating the tincture to the consistence of an extract, submitting the extract to the action of an alkaline solution by which the oleaginous matter is converted into soap, washing the undissolved portion with cold water, separating the liquor by filtration, treating with alcohol, and allowing the solution thus obtained to evaporate spontaneously or by gentle heat. Crystals of *piperine* are deposited, and may be further purified by alternate solution in alcohol and ether, and crystallization.

Pepper was very anciently used as a medicine. The notions of the ancients concerning it are mentioned by Pliny and Celsus; the latter classes it among his diuretics. The native doctors of India prescribe it in cases of cholera morbus, and Dr. Ainslie says he has known it to stop vomiting when other means failed. Theophrastus, in speaking of several species, mentions their calefacient operation, and that they are antidotes to hemlock. Dioscorides mentions the Indian origin of Pepper, and enumerates the various medicinal purposes for which they were employed, most of which appear to have been confirmed by physicians of a later age. Ettmüller, Bartholin, Ernestus, Kunrad and Schroder, in the last century, employed it in the cure of intermittent fevers.

Applied to the skin, Pepper acts as a rubefacient and vesicant; its action is rather that of a local stimulant. According to Dr. Stillé, "it stimulates the feeble digestion, and enables the stomach to appropriate food which, without its aid, would not be assimilated, and, at the same time, prevents the formation of flatus, or provokes its discharge;" but, if given in large quantities, induces an inflammatory condition. According to Pareira, on the vascular and secerning systems Pepper acts as a stimulant. It accelerates the frequency of the pulse, promotes diaphoresis, and acts as an excitant to the mucous surfaces. It has long been regarded as a stimulant for the urino-genital apparatus, with well-marked influence over certain morbid conditions of those organs. According to Riecke, the antiperiodic virtue of Pepper is exhibited upon the healthy economy—a few Pepper corns, taken before the expected appearance of the menses, arrests them for several days. Of this, he is not stated to have had much experience, but affirms that the females in Southern Germany have great confidence in their virtues.

Infused in spirit, it was a popular remedy for preventing the return of the paroxysms of intermittent fevers, given shortly before the expected attack. In 1816, Louis Frank, after having in vain endeavored to cure tertian ague with bark, and afterwards with opium, prescibed six Pepper corns, to be taken twice a day, and afterwards increased to nine. A cure was speedily effected. Afterwards, he treated seventy persons, and in a majority of cases the disease was arrested after the second or third paroxysm. The cases of relapse were rare—more so than when bark was used. Its employment and success suggested the use of piperine, which was exhibited chiefly by Italian physicians for intermittent fevers. In 1824, Miccoli, of Ravenna; Bertini, of Turin; Simonetti, of Pesaro, and Gordini, of Leghorn, used *piperine*, successfully, in a large number of cases. From the cases treated, Dr. Gordini infers that the piperine will cure fevers that resist sulphate of quinine, and that it will prevent a relapse better than the latter remedy. Riedmuller, of Nuremburgh, is reported to have treated five hundred cases very successfully with this remedy.

According to Dr. Meli, it has the same febrifuge properties as the alkalies of the cinchonas. At the hospital of Ravenna, he cured a great number of cases of intermittent fever by it, and goes so far as to affirm that its action is more certain and more prompt than quinia.

The febrifuge virtue of *piperine* has been confirmed by many other Italian physicians. Bertini gave it, in three-grain doses, during the apyrexia, to the extent of a scruple, made into pills, with a bitter extract. After two or three doses the fever was generally arrested. Gordini affirms that relapses occur less frequently after the use of piperine than after the use of sulphate of quinine. Its employment by others than Italian physicians appears to have confirmed their reports of its properties. Dr. Hartle, of Trinidad, states, in the Edinburgh *Medical and Surgical Journal*, that in the intermittents of that island he found piperine to eradicate the disease when quinia failed. He prescribed it as soon as the sweating stage was established, until eighteen grains had been taken, and on the following day, when intermission was complete, he directed the same quantity every three hours. It succeeded in every case in checking the paroxysm, and as soon as this was accomplished he gave, for some days, pills composed of pilulæ hydrargyri, 1 grain; piperine, 2 grains; sulphate of quinine, 2 grains; syrup, q. s. One to be taken morning, noon, and night. Dr. Hartle remarks that a number of patients object to taking sulphate of quinine, in consequence of its affecting the head; but piperine, although a powerful stimulant, carminative and febrifuge, does not in the least degree affect the sensorium.

Dr. Bloom, of Utrecht, has given it in intermittents, but not with the same success as quinia. He is of the opinion, "that both in general debility and in debility of the digestive apparatus piperine merits a preference over sulphate of quinia, both because it can be better borne by the stomach and because it acts more tonically upon it, and is particularly applicable in cases which resist quinia, or which frequently relapse in spite of the use of this medicine."

Dr. Rose, of Philadelphia, employed it in twenty cases of intermittent and remittent fevers with success, and also in "cases of low, nervous fever, or typhus." When he wishes a stimulating diaphoretic, no remedy is preferable for that purpose to piperine—not even volatile alkali. In this form of the disease, when the animal powers are about to yield to the influence of the disease, and the patient fall a victim to the timidity of the pratitioner, he has boldly withheld all other remedies and administered the piperine, in doses of two grains every two hours, until eight eight grains had been taken. The low, muttering delirium began to subside, the skin became moist, and the patient, sensible of his improvement, expressed himself better. Repeated the same doses the following day, and for three, four, or five days, when he found no fever; strength increased, and the patient, with an inclination for food, became convalescent.

Carpenter, on piperine, mentions several cases by Dr. J. C. Rosseau, of Philadelphia, in which it was used with much satisfaction. In the case of a person about forty years it produced a radical cure, in the dose of three grains, in twenty-four hours; continued for several days. A peculiar feature of the case was, that the patient had taken quinine for some days, in doses of thirty grains every twenty-four hours, and that during the use of it he was under a most violent and painful state of excitement.

Dr. Black also mentions a case of severe quotidan fever, attended with rejections from the stomach and a violent pain and great determination of blood to the head during the hot stage, with cold feet and delirium. On the day of intermission quinine was administered, which was often rejected by the patient. Nausea and headache was increased. Piperine was substituted, in doses of one grain every hour, to the number of ten a day. The paroxysms ceased, and the patient was cured in a few days.

I have given, as briefly as possible, the principal reports which have been published concerning its use, having observed very good results from the use both of the fluid extract of black Pepper and *piperine.* It is an article which should not be overlooked in the list of antiperiodic remedies, as there is abundant evidence of its value in intermittent fevers. Dr. Stillé says:—"Probably its real value consists in its stimulant operation; and in that it is particularly applicable, on the one hand, to very mild cases of the disease, and, on the other, to those chronic forms which are often sustained by want of tone in the system generally, and by debility of the digestive organs in particular. Under circumstances like those referred to, the association of black Pepper with quinia or bark is probably more efficacious than the administration of either medicine alone."

There appears to exist some difference of opinion as to the full efficacy of the drug being exhibited in the piperine, an alcoholic extract being preferred. The resin was employed by Dr. Lucas in intermittents, with success; and the volatile oil possesses, according to Meli, the same febrifuge properties as piperine. Therefore, a preparation which contains the resin, volatile oil and piperine, ought to possess more efficacy than either one alone.

The fluid extract of black Pepper of the United States Pharmacopœia is prepared with ether; the *piperine* is separated, and is really an oleo-resinous extract. It differs but little from what is sold under the name of oil of black Pepper, consisting mostly of the volatile oil and resin of Pepper.

The fluid extract, recently prepared, which, I am informed, represents for every fluid ounce one ounce of the Pepper, is sufficiently strong for general use, and contains the three principles of the Pepper. The dose is from ten to thirty drops. The solid extract is very convenient as an excipient for administering quinine, and when not conveniently obtained the fluid can be evaporated in a short time so as to become pillular. I have also found the fluid extremely convenient for making a cataplasm of mustard and ginger, moistening the mustard with it.

I have other formulæ, which I should like to present, but, having extended this article beyond my intention, I must omit them for the present. J.

From the London Pharmaceutical Journal, of December, 1859.

Cultivation of Medicinal Plants at Hitchin, Herts, England.

WILD OR SQUIRTING CUCUMBER.

Till within the last few years the cultivation of the wild or squirting cucumber (*Ecbalium officinarum* Rich., *Momordica elaterium* Linn.,) was almost entirely confined to Mitcham, in Surrey, and Ampthill, in Bedfordshire. Its cultivation is, we believe, given up at the latter place, at least for commercial purposes; for, upon making inquiries there, we can obtain no information respecting it. At Hitchin, however, it is now cultivated to some extent by Mr. Ransom, pharmaceutical chemist, of that town. We may conclude, therefore, that Mitcham and Hitchin are at the present time the only districts in which it is grown for commercial purposes. Its cultivation at the former place has already been described in this journal (vol. x., p. 168); we propose now to allude to it at the latter.

At Hitchin, the plants are either raised from seeds or by division of the roots. When raised from seeds, these are sown in the spring, usually about the end of March or early in April; the seedlings are then allowed to remain in the ground where they have sprung up, the soil having been previously highly manured with stable manure. A large number of plants are always self-sown. (The practice thus adopted at Hitchin is, in some respects, different from that carried out at Mitcham, for here it is customary to sow the ground about March, and to plant out the seedlings about June.—*Pharm. Journal*, vol. x., p. 168.) When the plants are raised by dividing the roots, this operation is performed in the spring, the plants employed for the purpose having remained in the ground during the preceding winter, at which season they are protected from the frost by being covered with manure and mould. As it is found that the slightest frost destroys the plants, it is necessary to be very careful in thus protecting them from its influence. The plants thus raised by dividing the roots are afterwards planted out in ground highly manured, as in the plan of raising from seed. From the above facts, it is clear that the squirting cucumber, although an annual under the natural conditions, yet, by being protected during the winter, its existence may be prolonged beyond a year—indeed, we have seen plants which we have been informed were more than three years old. Hence, an annual plant thus becomes a perennial. Mr. Arthur, of Mitcham, has also observed "that if the roots be covered up during the winter, the plant survives through several seasons; and he has now some which have lived three or four years." The fruits which are borne by plants more than two years of age are, however, much smaller, and their yield of elaterium less than those of younger plants; hence it is not customary to grow plants for commercial purposes beyond the second year of their existence.

The plants grow most luxuriantly in a damp, loamy soil; but it is found that a too great development is unfavorable to the production of the fruit, which is the only serviceable portion of the plant, because in all cases where the nutritive organs of a plant become highly developed but little fruit is produced. Hence a moderately dry, loamy soil, which has been highly manured, is that best adapted for the growth of the squirting cucumber. We are informed that a hot, moderately rainy season is that in which the plants thrive best, and yield most elaterium.

The plants flower freely in July and August, and towards the end of the latter month and the first two or three months in September the fruits are gathered for the preparation of elaterium. It is necessary to gather the cucumbers as nearly ripe as possible, for otherwise they will yield but a very trifling amount of the best elaterium; but, in consequence of their being thus collected in a comparatively ripe condition, the produce of many is lost, from the peculiar and well-known tendency of the fruit to discharge its contents when but slightly touched as it approaches ripeness. The common name of squirting cucumber, as applied to this plant, is thus derived. This loss of the juice in the fields during the process of gathering the cucumbers much increases the cost of obtaining and preparing elaterium. It is customary to employ boys to gather the cucumbers, and they are obliged to be very careful in handling the plants for the purpose of doing so, as otherwise the fruit frequently discharges its contents—and if this should reach the eye or other sensitive parts serious consequences might ensue from the irritation thus occasioned. To show the injurious effects that sometimes result from carelessness in handling the fruits, it may be stated that, about two years since, some of the boys employed in gathering them began to play, and whilst doing so one of them squirted the juice into another's eye, and the inflammation excited thereby was so great that the sight was for some time almost lost; in fact, it was more than a twelvemonth before it was entirely restored.

All the cucumbers produced at Hitchin are employed there for the preparation of elaterium. The process adopted (at least so far as can be ascertained by us, for there are certain peculiarities connected with the mode of collecting and manipulating the elaterium which are kept secret,) is as follows:—As the cucumbers are brought in from the field, they are at once washed to free them from adhering dirt and other foreign matters. This process of washing is, we are informed, always resorted to, but it becomes more necessary when the fruits are very dirty. Each cucumber is then cut lengthwise, so as to divide it into halves. This operation is usually performed by boys; and as the fruit is thus cut the halves are received into glazed earthenware pans. The divided cucumbers are then placed as soon as possible in a hempen cloth, and the whole afterwards placed in a common screw-press. A moderate pressure is now employed to press out the contained juice, which is allowed to run into a glazed earthenware vessel, placed ready for the purpose, and at the top of which a sieve is put, so that the expressed juice is strained as it runs from the press, and thus before any deposit can have taken place, which we regard as a very desirable mode of procedure. Mr. Ransom informs us that he is very careful not to have much pressure exerted, for otherwise the elaterium is much deteriorated in quality; and as we have had an opportunity of seeing the cucumbers after having been submitted to pressure, we observed that they were but moderately crushed, and hence the pressure employed could not have been very great, or they would have been reduced to a more pulpy condition. The juice, as it runs through the sieve, is somewhat turbid, and of a greenish-yellow color. When the pressure has been continued for a few minutes, and the juice all run out from the pressed cucumbers, it is poured into glazed earthenware jars, and allowed to stand for about twelve hours, by which time the whole of the elaterium will have been deposited in the form of a greenish, slightly yellow mass. (The time thus allowed for the deposition of the elaterium is much longer than that commonly adopted; thus, at Apothecaries' Hall about two hours are considered sufficient for the purpose, and at Mitcham the time allowed varies usually from three to four hours.) The supernatant liquor is then very carefully removed, and a deposit collected in a cloth. This deposit is then dried in a room heated by steam to a temperature of about 100° Fahrenheit, and the preparation of the elaterium is completed. The exact mode in which the supernatant liquor is removed, and the deposit collected and dried, is a secret. In some places where elaterium is prepared it is the custom to put aside the supernatant liquor and allow it to deposit again. The elaterium thus obtained is of a paler color and inferior in strength to the former. No use is, however, made at Hitchin of this supernatant liquor, but it is thrown away after the first deposit has been obtained. In fact, the time allowed for the first deposition is so long, that it is not likely that any further deposit would take place.

The amount of elaterium obtained from a bushel, or forty pounds of cucumbers, is about three drachms. This accords very nearly with the experience of others. Thus Mr. Arthur, of Mitcham, states that one bushel of fruit will yield about half an ounce, and Dr. Clutterbuck says that he obtained from half a bushel "less than two drachms of elaterium." We may fairly conclude, therefore, that half an ounce of good elaterium per bushel is about the ordinary yield, and that if a larger quantity be obtained, as is sometimes the case, that the excess is probably due to the use of too much pressure, and the resulting elaterium of inferior quality. We are informed, however, that the quantity of elaterium that can be obtained varies somewhat according to the weather in which the fruit is collected; thus, when the cucumbers are gathered in wet, cool days, the yield is less than when they are obtained on a hot, dry day.

The elaterium thus prepared at Hitchin is all sold to the wholesale druggists. We believe that much of the elaterium prepared in this country is not used here, but that a great proportion is exported to America and the Continent, where it is much more frequently employed as a medicinal agent. We think it probable that elaterium would be much more employed as a medicine in this country could it be always obtained of uniform strength; but on account of the various modes employed for preparing it, and the adulterations to which it is liable, this is far from being the case; and with such a powerful medicinal substance as it undoubtedly is, such a want of uniformity frequently leads to serious consequences. We consider it, therefore, very desirable to publish the processes of those who prepare good elaterium.

The elaterium, as thus prepared, is of a pale green color, with a slight yellowish tinge, which becomes more apparent by keeping. It is in light, thin, slightly-curved pieces, which breaks readily, and with a short fracture. It is readily reduced to powder when rubbed between the thumb and forefinger, thus proving the absence of any mucilaginous matter. It has a somewhat fragrant and agreeable odor, which is quite of a peculiar nature, for it does not recall any other substance to us, although by some writers on materia medica the odor of elaterium has been compared to that of ergot of rye combined with the fragrance of senna or tea.

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Use of Chloroform and Aconite in Neuralgia.

In a letter to the *Medical Times and Gazette*, Dr. Gueneau de Mussy writes:—

"For more than three years I have prescribed it in neuralgia of different regions; but here I want chiefly to allude to the most common and severe of neuralgic pains—the facial neuralgia—in which I have derived from the above-named remedy sometimes a complete and permanent cure, and always an almost immediate and considerable relief. In such cases I apply it directly to the gums of the side affected, where numerous divisions of the fifth nerve are most superficial. When the neuralgia is idiopathic—*i. e.*, unconnected apparently with any other disease—the formula is:—Two parts of spirit of wine or eau-de-colonge, one of chloroform, and one of tincture of aconite. The finger, covered with a piece of lint or soft thick linen, is dipped in the mixture and rubbed gently against the gum for a few minutes. I do not use a sponge, because it would take up too much of the liquid, which, by pressure, might drop into the mouth.

"When the pain is connected with some organic disease, as a deranged tooth, chronic inflammation of the gums or of the sockets, or, as I have observed, superficial necrosis of the bone, I have found the tincture of iodine a very beneficial substitute for spirit of wine in the formula above.

"The infra-orbitary branch being the most commonly affected, it is chiefly in neuralgia in this part the application has been successful; but by no means exclusively so—it answers very well in pain of the lower branch; and I have observed some very severe cases of supra-orbitary neuralgia, in which the same application has been attended with an equally satisfactory result.

"This shows, moreover, that the sedative agent may produce its effect, as the irritating one so frequently does, on a part distant from the spot on which it was applied in the same, and even in a different branch of a nerve."—*Chicago Medical Journal.*

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Belladonna in Scarlet Fever and in Profuse Lactation.

Dr. J. W. Benson, Professor of Anatomy in the University of Louisville, says:—

"In twenty-five successive cases of this disease, which have been latterly under my professional care, the treatment consisted in inunction of the parotid and submaxillary regions, by an unguent composed of fifteen grains of the extract of belladonna to an ounce of simple ointment. This was applied freely and frequently, as soon as the patient complained of sore throat. A piece of flannel was afterwards applied, and in no case was any other treatment adopted, except the administration of small quantities of neutral mixture during the day. In some cases of rapidly occurring tumefaction of the throat, the prompt subsidence thereof, under the treatment, left no room for doubt as to its efficacy. I do not pretend to offer this mode of treatment either as a cure for scarlet fever or as the sole means to be relied upon in any case, but I do claim for it a controling power over the engorgement, and hence a prevention of those destructive ulcerations of the throat which are so much and so justly dreaded. In some cases it has seemed to have a salutary effect upon existing diarrhœa, as soon as the system was influenced by the remedy.

"In one case only was I compelled to discontinue its use because of its constitutional effect. I will not here discuss its *modus operandi*, but simply suggest that the experiments of physiologists in reference to the influence of the organic nerves upon glandular organs, coupled with an experience of thirteen years in its use as a restraining remedy in salivation, and a more limited but somewhat extensive observation of its influence on the mammary gland, seemed to justify, on purely rational and philosophical grounds, the adoption of the course pursued.

"During a discussion, some months ago, in the College of Physicians and Surgeons, upon the merits of belladonna treatment in profuse lactation and mammary inflammation, I took the liberty of intimating that, perhaps, the contradictory results of the observation of members might have obtained from a failure to distinguish between the pathological condition of the gland itself and that of the areolar structure in relation with it, for, if my views of its action be correct, it might not influence directly the latter condition, but would prove potent in the former. Since the results of the application, as indicated, were reported to the College, some of my friends have adopted the same course, and with the same results, viz: perfect success in every case.

"They, therefore, concur with me in attributing such results to something else than mere coincidences or negative effects. They may not be, but the application is a simple and, under judicious watchfulness, a harmless one; and I will be as free to confess its inertness, as I am now anxious to press its claims to attention, so soon as my duty shall seem to indicate such a course."—*Louisville Monthly Medical News.*

Selections.

Severe Hæmorrhage from the Tonsil Arrested by the Solution of Perchloride of Iron.—Dr. Thompson applied it to the opening from which the blood was issuing, by binding a piece of lint around the entire forefinger, so as to form a mop. Pressure was kept upon the wound until he could apply the solution, which was done freely two or three times. The bleeding was at once arrested. Similar treatment upon its recurrence was permanently successful. In default of its success, Dr. T. had determined to tie the carotid artery.—*London Lancet.*

Ulcerated Housemaid's Knee.—This female presented an inflamed and ulcerated bursa of the knee, which had undergone scrofulous degeneration. The base or stool of this chronic ulcer, as the encircling rim of unhealthy plastic matter was called by Sir Charles Bell, was hard and thickened. Two ordinary scrofulous ulcers of smaller size were seen on the inner side of the joint. Dr. Pancoast remarked that an ulcer in this condition often refused to heal, when it would readily do so if the hard circular rim were divided. In many cases of ulcers of a specific kind he often destroyed the rounded form of the base by incisions into it, and sometimes by the removal of a V shaped piece, with very good effect. In this case he divided the edges through to the outer healthy structure, in three different positions, not deeply, lest he should involve the involucrum of the knee-joint. A corn meal and yeast poultice was ordered to be applied, renewed every six hours, and the following tonic and alterative pill directed to be taken, twenty minutes after each meal:—Potassii bromide, grs. iij.; ext. ignatiæ amar., piperin, *aa.* gr. ⅛; ferri carb., gr. i. Mix. After twenty-four hours' poulticing, the following ointment was directed to be used:—Hydrarg. oxyd. rubr., ℥j.; cerat. plumbi. subacet., ʒss.; vini opii., f. ʒj. Mix. Lotions of lead water and laudanum were also prescribed, to be applied over the ointment with patent lint covered with oiled silk, retained by a few turns of a bandage.—*Medical and Surgical Reporter.*

Remittent Fever in St. Louis.—The Medical Society of St. Louis (reported in the St. Louis *Medical and Surgical Journal* for November,) state that the several forms of malarial fever have been unusually abundant in that city the past season. At the O'Fallon Dispensary, 188 cases were prescribed for in a single afternoon. The type seem protean. Quinia and calomel were found as useful as ever, and largely relied upon. Dr. Boisliniere suggested dry cupping over the epigastrium, as very useful in allaying irritation and vomiting. Dr. Pallen recommended mixing the quinia with champaigne, to quiet the stomach and prevent vomiting. He has found this practice very useful in many cases.—*Chicago Medical Journal.*

[Have the physicians of St. Louis tried piperine, or other preparations of piper nigrum, as suggested by Dr. Hartle, of the West Indies, in similar cases, where irritation and vomiting existed.]

Diphtheritis.—Prof. Alonzo Clark, in an able and interesting lecture upon this subject, in the College of Physicians and Surgeons of New York, published in the Philadelphia *Medical and Surgical Reporter*, of Feb. 11, concludes as follows:—1st. That inasmuch as diphtheria is a *manifestly constitutional* disease, so must our main reliance be placed on *constitutional treatment.* 2d. As the disease is of an *asthenic* type, the remedies employed must be such as will give tone to the system. The best of these are the fluid preparations of iron, quinine, &c., together with an invigorating diet and the occasional use of stimulants. 3d. The administration of mercury, with a view of obtaining its *constitutional* effects, is a doubtful expedient, but the application of *dry calomel* to the ulcerations of the throat is of decided benefit. 4th. The application of the nitrate of silver to the membrane itself is of no special service, whereas if applied to the parts immediately around the membrane it tends to prevent its further extension. 5th. The administration of chlorate of potash, both in the form of a gargle and as an internal remedy, though not, as was claimed, a specific in this disease, is still of some benefit, and should therefore form a part of our treatment.

Opium in Poisoning by Stramonium, etc.—Dr. T. L. Maddin, in the Nashville *Medical Record*, reports a case of poisoning by the seeds of datura stramonium successfully treated by laudanum. Removal of such portions of the poison as remained in the intestinal canal, being first provided for by emesis and catharsis. The controling power of the opiate over the constitutional disorders was distinct. Dr. M. urges the opium as a counter poison also to belladonna, and similarly acting agents, considering "the pupil in all cases as a reliable index as to how far with safety we may proceed in its use." The constitutional effects of the opiates he deems likely to be relieved by belladonna, &c., under similar physiological reasons.—*Chicago Med. Journal.*

Treatment of Scarlatina by Iodine.—W. Reeves, M. R. C. S., in the London *Lancet*, recommends in all cases of scarlatina, as soon as diagnosticated:—Potassii iodid., ʒ i.; iodine, gr. ii.; potassæ chlorat., ʒ i.; potassæ nitrat., ʒ iss.; aquæ, ℥ viii. Mix. From a teaspoonful to a tablespoonful every four hours, according to the age of the patient. He adds to this, local application of the iodine to the throat, internally, by means of a feather, and externally in the form of ointment over the glands. He claims that "there are no other remedies in this disease at all to compare with iodine, thus employed."—*Chicago Medical Journal.*

Iodide of Ammonia in Syphilis.—As the result of several trials made by M. Gamberini, of Bologna, it is stated—1. That it is suitable in all cases in which iodide of potassium and sodium are employed. 2. It leads to a rapid cure. 3. The quantity given daily may be carried as high as from half drachm to half ounce, and intolerance is rarely exhibited. 4. Employed in friction with olive oil, it causes the disappearance of nocturnal syphilitic pains. 5. The signs of intolerance are a sense of burning in the throat and heat of the stomach; these rapidly disappearing on the suspension of the medicine for a couple of days. 6. Under the internal use of this medicine indurations consecutive to hard chancre disappear, as do also the indurated ganglionic pleiades in the groin. 7. Arthralgia, rheumatoid affections, periostitis, enlarged glands, and papulo-vesicular syphilide of the back, are the forms of syphilis which have best yielded to this drug.—*Bull. de Thérap.*

Treatment of Obesity.—Mr. Duchesne Duparc read a short paper on the use of *fucus vesiculosus* for the treatment of obesity. Having tried this plant for the cure of inveterate psoriasis, the author came to the conclusion that its reputation for the removal of that disease was much superior to its real value; but that in another respect the drug produced an unexpected result, fucus vesiculosus inducing rapid loss of flesh, without discomfort or disturbance of the digestive functions. Mr. Duchesne related several cases, whence it appears that in persons affected with premature or excessive obesity, the weight of the body may be much reduced by the use of the leaves and stems of fucus vesiculosus, in decoction, powder, or pills.—*Championniere's Journal.*

Valerian in Diabetes.—Rouyer and Trousseau first discovered the beneficial effect of large doses of the root of valerian in diabetes, even thirty grammes per day. Trousseau corroborates (*Gaz. des Hop.*, 113, 1858,) their statements by a case treated by him in the same way. The patient had been, for a considerable time, subject to different courses of treatment, embracing nearly every remedy known to have ever proved successful, without any relief; the only noticeable benefit appearing as long as he took, besides other remedies, ten grammes of the powdered root cf valerian minor. The disease had lasted thus four years, when Trousseau prescribed first ten, then twenty and thirty grammes of the extract of valerian, with the most astonishing result: the quantity of urine decreased steadily, and in twenty-six days the patient could be dismissed, the urine voided during a day surpassing the quantity of fluids taken by only one litre.—*Cleveland Medical Gazette.*

Pharmacy.

FLUID EXTRACT OF CHAMOMILE.

The use of chamomile, not only as an agent to improve the digestive functions when disordered by disease, as an antiperiodic, and as a general tonic, but as an agent for preventing suppurations in phlegmonous erysipelas, in phthisis, and, in fact, every case in which it is desired to prevent too abundant suppuration, suggested a concentrated preparation of it, in the form of a fluid extract.

Take of fresh chamomile flowers,.................1 pound,
Alcohol of sp. gr. 871°,..................q. s.

Moisten the chamomile, in coarse powder, with the alcohol, then pack in a percolator, and cover with the alcohol; digest six days, and draw off twelve ounces, which set aside. Continue the displacement with diluted alcohol, until it is freely exhausted of its bitterness, which evaporate in a vacuum to four fluid ounces. Mix and filter. One drachm of this preparation represents sixty grains of chamomile flowers, which is usually given in doses of twenty grains, as a tonic, to one drachm, as an antiperiodic—making the dose for like cases from twenty minims to one fluid drachm.

SYRUP OF CHAMOMILE.

Take of fluid extract of chamomile,............. 4 ounces,
Syrup,..............................12 "

Mix, with syrup moderately warm, and strain through flannel. The preparation is as clear as that made from the flowers, with the convenience of being made at will. The dose is one-fourth that of the fluid extract, or from two to four drachms.

FLUID EXTRACT OF LEPTANDRA.

Take of Leptandra root, in coarse powder,..............1 pound,
Alcohol of sp. gr. 871°......................q. s.

Moisten the powdered root with alcohol, and allow it to stand twelve hours; then pack it in a percolator, and pour on alcohol until the material is fully covered. Allow it to digest for forty-eight hours; then displace gradually, returning to the displacer the first runnings, until what passes is clear, adding, if necessary, more alcohol, until twelve fluid ounces shall have passed. Setting this aside, cover the material with diluted alcohol, and continue the displacement until the root is entirely exhausted of its medicinal properties; evaporate in a vacuum to four fluid ounces, and mix with the twelve fluid ounces reserved, making one pint of fluid extract.

This gives a preparation of the strength of one ounce of crude material to one fluid ounce of extract; and as the dose of the powdered root is from twenty to sixty grains, that of the fluid extract will form one-third to one fluid drachm.

The form of a fluid extract allows of its ready combination with other fluid extracts, depending upon the purpose for which the combination is made.

Leptandra possesses valuable tonic, cholagogue and laxative properties; is much employed in hepatic affections—and for this purpose is not unfrequently combined with the fluid extract of mandrake, in bilious and typhoid fevers, in dyspepsia and dysentery.

SOLUBILITY OF ALKALOIDS IN OLIVE OIL.

We have already furnished our readers Pettenkoffer's experiments on the solubility of alkaloids in chloroform (page 17 of this volume). We now furnish the result of his observations on their solubility in olive oil. It is suggested such solutions might be employed, instead of pomatums or ointments, for external application of these agents. One hundred parts of olive oil, at ordinary temperatures, will dissolve of—

Morphia,	0.00	**parts.**
Narcotina,	1.25	"
Cinchonia,	1.00	"
Quinia,	4.20	"
Strychnia,	1.00	"
Brucia,	1.78	"
Atropia,	2.62	"
Veratria,	1.78	"

[*Jour. de Pharm.*, and *Jour. and Trans. of Md. Col. of Phar.*

DETECTION OF PLUMBAGO IN IRON REDUCED BY HYDROGEN.

M. Liénart has found that the *pulvis ferri*, or iron reduced by hydrogen, for medicinal purposes, is sometimes sophisticated with plumbago or black lead. This fraud is easily detected by dissolving the iron first with weak sulphuric acid, and terminating the operation with aqua regia; the plumbago remaining can be collected upon a filter and examined. The author has found as much as fourteen per cent in some specimens.—*Chem. News, Dec.* 10, 1859.

ADULTERATION OF LIQUORS.

Dr. Hiram Cox, inspector of liquors at Cincinnati, in a late report on their adulteration, relates that he observed one day, in a grocery store, a man shedding tears and gasping while drinking a glass of whiskey. He called for some of the same, and a piece of litmus paper dipped in it turned scarlet. He took the liquor to his laboratory, and the analysis gave seventeen per cent of alcoholic spirits, instead of forty, which is proof, the difference being made up with red pepper, caustic, potassa, nux vomica, &c. One pint of such liquor would kill the strongest man.—*Phil. Med. and Surg. Reporter.*

[Dr. Cox has, in pursuing his investigations, made a thorough examination of such liquors as he found in market. Over 600 inspections have been made, and ninety per cent of all that he has analyzed he found filled with poisonous ingredients. His developments have caused considerable confusion among distillers and brewers,. as well as habitual drinkers of the poisonous compounds. Much of the brandy sold is simply whiskey, colored, and flavored with oil of almonds and oil of cognac. The whiskey often is not rectified, and contains all the impurities of raw whiskey.]

ANALYSIS OF TOKAY WINE.

By Dr. Ziurek.

The quantitative analysis gave the following results:—

One hundred grammes of a pure sample of this wine contain—

Absolute alcohol,	9.108	grammes.
Œnanthic ether (imponderable),	..	
Grape sugar,	11.031	“
Œnanthin (gum),	4.187	“
Fatty matter,	0.007	“
Albuminous matter,	0.118	“
Tannin,	0.311	“
Extractive,	1.478	“
Acetic acid,	0.032	“
Tartaric and uvic acid,	0.211	“
Bitartrate of potassa,	0.238	“
Tartrate of lime,	0.113	“
Phosphate of magnesia and lime,	0.265	“
Sesqui-oxide of iron,	0.113	“
Alumina and silica,	traces.	
Water,	72.700	“
Total,	99.957	“

J. M. M.

[*Archiv. de Pharm.*, and *Journal of Pharmacy.*

UNGUENTUM GLYCERINI.

Under this title, Prof. Simon, of Berlin, describes an ointment forming a most excellent excipient, composed of five parts of glycerine and one part of amylum. It forms a smooth, butter-like substance, free of all smell, exciting no chemical action, and unaffected by temperature. It is to be preferred to similar substances: 1. For its elegance, its freedom from repulsive odor, and its not exciting erythema in irritable skins. 2. It can be kept in large quantities without undergoing any change, even when chemically combined with other bodies. 3. Extracts and soluble salts may not merely be mechanically mixed with it, but may be held in a dissolved condition, the apsortion being thus much facilitated. 4. As its consistence remains unchanged, it does not extend beyond the parts to which it is applied. 5. It can be removed with great facility.—*Verges' Zeitschrift.*

VERATRUM VIRIDE AND GLYCERINE.

Veratrum has been used externally in local inflammation, with much success in cases of inflammation of the gums and mouth. I have found its combination with glycerine more pleasant and equally effectual as the fluid extract. Evaporate one ounce of fluid extract to half an ounce, and when warm mix with one ounce of glycerine. Apply externally, by saturating lint with it, and putting to the inflamed spot, or rub the parts thoroughly with it and cover with flannel. J.

FORMULA FOR ADMINISTRATION OF QUININE.

Dr. J. W. Ellis, of Marion, Ind., gives the following formula for the admintration of quinine, and claims for it the advantage of being pleasant to the taste. We give it for the benefit of such as desire to try it:—

℞.—Quinine,	20	grains.
Tannin,	6	"
Aqua,	½	ounce.
Simple syrup,	1½	"
Essence of peppermint,		
Essence of cinnamon,	*aa.* 5	drops. M.

[*Druggists' Circular.*

◆

Editorial.

Convention for Revising the Pharmacopœia.—This Convention meets at Washington on the 2d of May, for the purpose of revising the Pharmacopœia of 1850, and the presentation of a new one for 1860. This is an important work, involving judgment and experience. Many substances, at one time much employed by the profession, are passing out of use, although not entirely discarded, giving place to new remedies brought to the notice of the profession without being fully adopted; therefore the necessity of the primary and secondary lists—the one including substances of recognized efficacy; the other, those employed as remedies of apparent importance, to be tested by the judgment and experience of the profession.

The section of fluid extracts was quite new in 1850. Some additions are now suggested. The Committee of the Pharmaceutical Association to which this subject was referred, at its last meeting, recommended that there should be made officinal: fluid extracts of buchu, ergot, wild cherry, cimicifuga, cinchona, gentian, ipecac, lobelia and taraxacum—an addition of nine preparations to the present list, or sixteen in all, from the large number now in use, numbering over one hundred and fifty kinds. We can readily understand why it is not deemed best, at this time, to incorporate this element too largely into the national Pharmacopœia. They are not recognized in other Pharmacopœias, being of comparatively recent introduction. Until their utility is fully established, it is deemed best not to endorse too large a number. These considerations apply very properly to those from the secondary list of remedies; but when the article is recorded in the primary list, a preparation of it, representing for each fluid ounce one ounce of the material, the dose, in grains, of the latter being represented by the same number of minims of the former, seems to us more convenient and available to the physician than the crude root, which must undergo preparation before it can be used advantageously. We refer more particularly to those articles in use largely, as aconite (leaves and root), belladonna, hyoscyamus, stramonium, conium, sanguinaria, chamomile, colchicum (root and seed), cranesbill, leptandra, foxglove, ipecac, jalap, podophyllin, rhatany, spigelia, seneka, serpentaria, squill, uva ursi, and veratrum viride, and, perhaps, others, the use of which probably are not as large, but as important, in many respects, as Pareira brava, cannabis indica, hop, cypripedium, matico, &c. As reliable remedies, all the above appear to be as fully established as those it is proposed to introduce.

The uniform standard of strength proposed is desirable, and the uniform presence of the active constituents of the drug must necessarily depend upon the quality of the article employed, and its methodical extraction, as well as subsequent care in manipulation.

The subject of weights and measures will be discussed at this Convention, but it is doubtful if any change in the present system will be made immediately.

We shall endeavor to give its proceedings in our next issue.

The following gentlemen have been appointed delegates to the Convention:—

To the Editors of the Medical and Surgical Reporter:

GENTLEMEN:—The weekly issue of your journal affords the opportunity of publishing a complete list of delegates to the Convention for Revising the Pharmacopœia, to meet in Washington on the first Wednesday in May next, so far as their names have been sent to me up to the present time. The lists hitherto published have been more or less imperfect, in consequence of the necessity of sending the names in time for insertion in the journals issued at the beginning of March. I have received notices of the following appointments:—

From the Medical Association of Maine—Drs. Alonzo Garcelon, W. T. Cummings, and A. F. Fuller.

From the Massachusetts College of Pharmacy—Messrs. Theodore Metcalf and Chas. F. Carney.

From the Connecticut Medical Society—Drs. Henry Bronson, N. B. Ives, and Gordon W. Russel.

From the Medical Society of the State of New York—Drs. E. R. Squibb, Howard Townsend, and Caleb Green.

From the New York Academy of Medicine—Drs. B. W. McCready, E. H. Davis, and E. R. Squibb.

From the College of Pharmacy of the City of New York—Messrs. Wm. Hegeman, Alex. Cushman, and John Meakim.

From the Medical Society of the State of Pennsylvania—Drs. J. Augustus Ehler, Wilmer Worthington, and W. R. Finley.

From the College of Physicians of Philadelphia—Drs. George B. Wood, R. P. Thomas, and Robert Bridges.

From the University of Pennsylvania—Drs. Joseph Carson, R. E. Rogers, and Joseph Leidy.

From the Jefferson Medical College of Philadelphia—Drs. Franklin Bache and T. D. Mitchell.

From the Philadelphia College of Pharmacy—Messrs. Wm. Procter, Jr., Edward Parrish, and Alfred B. Taylor.

From the Faculty of Physic of the University of Maryland—Professors Samuel Chew, Chas. Frick, and Wm. E. Aikin.

From the Maryland College of Pharmacy—Messrs. G. W. Andrews, Israel J. Grahame, and Alpheus P. Sharp.

From the Medical Society of the State of North Carolina—Drs. William George Thomas, Peter E. Hines, and Edward Warren.

From the Cincinnati College of Pharmacy—Messrs. E. S. Wayne, W. S. Merrell, and W. J. M. Gordon.

From the Chicago College of Pharmacy—Professors F. Scammon, J. H. Rauch, and George Buck.

GEO. B. WOOD, *President of the Convention of* 1850.

THE American Medical Association will hold its thirteenth annual meeting, at New Haven, on the first Tuesday of June, 1860.

BOSTON MEDICAL AND SURGICAL JOURNAL.—Drs. Morland and Minot have withdrawn from this journal, and Drs. Oliver and Ellis have assumed its charge. This journal is among the oldest journals published in this country, and has always occupied a high and independent position.

THE *Virginia Medical Journal* makes its appearance this year under the new title of the *Maryland and Virginia Medical Journal*, and is edited by Drs. J. B. McCaw and W. C. Van Bibber. This journal has always been one of the ablest and best conducted journals in the country.

THE *Louisville Medical Journal*, published by Dr. John R. Timberlake, is edited by Dr. Thomas Colescott. Dr. Colescott was connected with a journal formerly published in Louisville, and has the reputation of being an able writer, well versed in medical literature.

TO CORRESPONDENTS.—We cut the annexed from the "*Country Gentleman*," and insert it for the purpose of showing the great caution necessary to be used in giving the full address in writing letters. We were obliged, a short time since, to address *twenty-six* letters to postmasters, to ascertain the residence of a physician who omitted to put the name of the State upon his letter:—

> CARELESS LETTER-WRITERS.—We lately received a letter from a subscriber, complaining that he had been cheated by a person who some time since advertised some seeds in this paper—that is, he had sent the required seeds, but had received no stamps in return. Knowing the advertiser to be an honest man, we sent our correspondent's letter to him, that he might explain the cause of the failure. In reply, he says:—"I have received over 800 letters since the publication of my advertisement in the *Country Gentleman*, and in twelve of them the writer's name is wanting, and several of them no post office, or anything else by which I could find out his residence, is given. I have now over twenty of these letters, which I have been unable to answer, either for the want of the name or residence of the writers. These letters have given me a vast deal of trouble; and I wish you would try to impress upon your readers the necessity of giving their full address." Our advice to those who have sent stamps for seeds, and have not received them, is to write again, and be careful to give their names, post office, county, and State.

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Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER V.

LIRIODENDRON TULIPIFERA.

(*Tulip Tree—Poplar—American Poplar—White and Yellow Poplar, &c.*)
Natural Order, *Magnoliaceæ;* Linnean System, *Polyandria—Polyginia.*

THIS well-known tree, one of the most beautiful of our American forests, needs no special description. Deriving its name from the resemblance of its flowers to those of a lily, it constitutes the only species of the genus, and is closely allied to the magnolias, not only in its botanical affinities, but its medicinal properties. The general character of the order is, to have a bitter tonic, aromatic taste, and fragrant flowers; the latter producing a decided and specific action on the nervous systems. The tulip tree is met with in nearly all parts of the United States, from Florida to Canada, and is especially abundant in Ohio, Kentucky, and Tennessee. The Connecticut river seems to be the eastern limit of this tree, and it is rarely found north of Lake Champlain. Loudon makes three varieties: 1st, the *blunt-leaved tulip tree;* 2d, the *acute-leaved tulip tree;* 3d, the *yellow-flowered tulip tree*, or *obtusiloba*, *acutifolia* and *flava.* Griffith states that there are two varieties, one having the side lobes of the leaves acute, and the other obtuse, as well as two varieties in the color of the wood, one being white, the other yellow. Rafinesque states, in his Medical Flora, that the white-wood belongs to the acute-lobed variety, and the yellow wood to the obtuse-lobed, but it is found that there is no uniformity in this respect, and that the only way to determine the color of the wood is actual inspection. The wood is very valuable for many purposes, being light, fine grained, and easily worked, besides being very durable, if not exposed to the weather.

Chemical Composition.—The first elaborate analysis of the bark of the liriodendron was made by Dr. Emmet, in 1832, (*Phil. Jour. Pharm.*, vol. 3, p. 5.) He gives the name of *liriodendrine* to what he believed to be the active principle. In the pure state, he describes it as solid, white, crystallizable, brittle, insoluble in water, soluble in alcohol and ether, fusible at 180°, volatizable and partly decomposed at 270°, of a slightly aromatic odor, and a warm, bitter, pungent taste. It is incapable of uniting with alkalies, which precipitate it from the infusion or decoction of the bark by combining with the matter which renders it soluble in the water. It does not combine with acids, and is precipitated by water from its alcoholic solution. He obtained it by macerating the root in alcohol, boiling the tincture with magnesia till it assumes an olive-green color, then filtering, concentrating by distillation till the liquid becomes turbid, and finally precipitating the liriodendrin by the addition of cold water. The virtues of the bark are exhausted by water and alcohol, but are injured, if not entirely destroyed, by long boiling. According to the earlier analysis of Dr. Rogers, in 1802, (*Inaug. Disser.*, *Phil.*,) the bark contains gum, resin, muriatic acid, iron, salts of lime, vegetable mucus, and starch. As the properties of this bark are dissipated by long keeping and exposure to the air, the active principle has been supposed to be volatile. Dr. Wood states, and we can corroborate the fact, that specimens of the bark, which have been long kept in the shops, are almost insipid. This, taken in connection with the other fact mentioned, namely, that its properties are lost by boiling, there is good reason to believe that its peculiar properties do reside at least, in part, in a volatile principle.

The most recent analysis, that of the Tildens, gives the following results:—

Organic Matters,	94.166
Inorganic "	5.834
Total,	100.000

Albumen,	0.939
Gum,	0.939
Starch,	2.285
Extractive,	8.008
Bitter Matter,	3.716
Sugar,	0.985
Coloring Matter,	5.149
Oil,	5.677
Resins,	5.362
Soluble Salts,	0.875
Insoluble Salts,	4.959
Lignin, etc.,	66.106
Total,	100.000

The strong aromatic pungency of this bark, doubtless, resides in the volatile oil; of which it contains over five per cent, exceeding in amount the bitter principle, and the medicinal properties depend, for the most part, on this combination.

The amount of albumen, gum, and starch is very small, less, indeed, than in almost any known bark. It is entirely destitute of tannic or gallic acid, and possesses no astringency. The bitter principle holds a place between the resins and essential oils, uniting neither with acids nor alkalies, when pure.

Medicinal Properties and Uses.—The bark of the liriodendron, as its chemical composition would indicate, is a stimulating, diaphoretic tonic, with considerable antiperiodic virtues. The cold infusion acts as a diuretic. The bark of the root is less stimulant and more purely tonic than that of the trunk, or smaller branches, and is always to be preferred. Experience has abundantly established the virtues of this bark in the cure of intermittents, and other paroxysmal diseases where tonics are indicated. Dr. Rush ranked it next to Peruvian bark in such affections. It has had considerable reputation, also, in the cure of chronic rheumatism and gout—probably from its diaphoretic properties, combined with its tonic influence—and the same combination has recommended it in dysentery, especially in the advanced stages, as well as chronic diarrhea. Formerly, and perhaps at the present time, in some parts of our country, it was employed a good deal as a domestic remedy for worms. Dr. Young states that he has never known it to fail in a single case of the kind that came under his observation, (*Eberle*, *Ther.*) We have reasons, however, to believe that its anthelmintic properties are no greater than those of the bitter tonics generally. Like the other bitters, when given in powder and in considerable doses, it is very certain to prove laxative or cathartic. The resinous principle in the bark of the liriodendron renders it somewhat irritating in irritable states of the stomach, and the gastro-intestinal mucous membrane, and imparts to it the cathartic properties. In many cases the stomach will not tolerate it unless each dose is accompanied by some opiate preparation, as a few drops of laudanum. Its use by the aborigines of our country, in the cure of intermittents has been described by the poet:—

"If fever's fervid rage,
Glowed in the boiling veins," * * *
* * * * "Anxiously they sought
The Liriodendron, with its varied bloom,
Orange and green and gold," * * *
"To supply
The place of famed Cinchona, whose rough brow,
Now ruddy, and anon with paleness marked,
Drinks, in its native bed, the genial gales
Of mountainous Peru."

In many parts of the West, this bark, in combination with dogwood, is steeped in brandy, and taken as a remedy, as well as preventive of fever and ague, and with marked success.

Preparations: Powder, fluid extract, tincture, wine, syrup.—The powder has been generally employed, but its bulk, compared with the amount of active principle, as in the cinchona and other barks, renders this form objectionable. A hydro-alcoholic fluid extract, prepared *in vacuo*, would be the most eligible of all other preparations, inasmuch as it would contain all its active principles, including the volatile oil, in a concentrated form. The dose would be from one to three drams. The tincture, made to complete saturation, answers well as a stomachic tonic, and the same remark will apply to the wine, made with good sherry or madeira. The syrup is best prepared from the fluid extract, adding the usual portion of simple syrup, as before mentioned in regard to other tonic and astringent substances. A good fluid extract of this substance, prepared in a proper manner, is yet a desideratum.

SALIX (*Willow*).

Natural Order, *Salicaceæ;* System Linnean, *Dioeciæ—Diandria.*

This natural order embraces two well-known genera in North America, viz: the *salix* and *populus*, both possessing similar medicinal properties, and both employed in the arts, and for their therapeutical virtues from a very remote antiquity. The willow is a very large genus, confined mostly to the temperate latitudes of both hemispheres.*

The *salix alba* has only been recognized by our National Pharmacopœia, but it is very doubtful whether it contains as much of the active principles of the genus as some of our native species. Nor does it contain as much as the *S. russelliana*, (*the Bedford willow*), the *S. purpurea* or the *Cupria*, all of which are naturalized in many parts of our country.

Chemical Composition, &c.—The white willow (*S. alba*) has been repeatedly analyzed by European chemists, especially Pelletier and Caventou, who found in its bark *bitter yellow coloring matter*,

---

* The following species, according to Carey, have been found indigenous to the United States, though there are, doubtless, others not yet described:—

S. Candida—Hoary Willow.
S. Tristis—Dwarf Gray Willow.
S. Humilis—Low-bush Willow.
S. Discolor—Glaucous Willow.
S. Eriocephala—Silky-headed Willow.
S. Sericea—Silky-leaved Willow.
S. Petiolaris—Petioled Willow.
S. Cordata—Heart-leaved Willow.
S. Angustata—Narrow-leaved Willow.
S. Rostrata—Long-headed Willow.
S. Nigra—Black Willow.
S. Lucida—Shining Willow.
S. Longifolia—Long-leaved Willow.
S. Pedicellaris—Stalk-fruited Willow.
S. Uva Ursi—Bearberry Willow.

Seven other species have been introduced from Europe, viz:—

S. Alba—White Willow.
S. Fragilis—Brittle Willow.
S. Phylicifolia—Smooth Mountain Willow.
S. Repens—Creeping Willow.
S. Herbaceæ—Herb-like Willow.
S. Purpurea—Purple Willow.
S. Viminalis—Basket Osier.

green fatty matter, similar to that found in cinchona; *tannin*, *resinous extract*, *gum*, *wax*, a *magnesian salt*, *containing an organic acid* and *woody fibre.* They, however, failed to detect salicine. Their resinous extract has been supposed to be identical with what Braconnot calls *corticin.* Sir Humphrey Davy analyzed two species of willow, viz: *S. ruselliana* and *alba*; from four hundred and eighty pounds of the first he obtained thirty-three pounds of *tannin*, and from the *alba* eleven pounds. It is difficult to say why the *alba* should continue to be the officinal species, while it is so far inferior to several of the others, probably, because it was the species employed in medicine by the ancients, and brought again into notice in 1763 by the Rev. Mr. Stone. Tilden's recent analysis of our *S. eriocephalus*, (*willow pussy*, or *silky-headed willow*,) gives of—

Organic Matters, - - - - - -	96.846
Inorganic Matters, - - - - -	3.154
Total, - - - - - - -	100.00

Albumen, - - - - - - - - - -	0.797
Gum, - - - - - - - - - -	1.675
Starch, - - - - - - - - -	7.115
Sugar, - - - - - - - -	1.171
Extractive, - - - - - - - - -	3.510
Tannin, - - - - - - - - -	2.285
Coloring Matter, - - - - - - - -	7.232
Chlorophylle, - - - - - - - -	0.905
Resin, - - - - - - - - - -	4.354
Salicin, - - - - - - - - -	5.714
Populin, - - - - - - - - - -	1.143
Soluble Salts, - - - - - - -	1.142
Insoluble Salts, - - - - - - -	2.012
Lignin, &c., - - - - - - - - -	60.945
Total, - - - - - - - - -	100.000

A decoction of willow bark, made with distilled water, is colored dark green by sesquichloride of iron, but with spring water dark purple. Solution of gelatine produces a precipitate, (*tannate of gelatine*,) but tincture of nut-galls causes no turbidness. A strong decoction of willow bark, containing much salacine, is reddened by concentrated sulphuric acid—*salacine.* This substance exists in the bark and leaves of a great variety of trees, and especially in the *populus*, and those species of *salix* which possess a bitter taste. It may readily be obtained by boiling three or four times in water, evaporating the decoction till it amounts to but three times the weight of the bark employed, then digesting for twenty-four hours with oxide of lead, and evaporating the clear liquid to the consistence of a syrup. After a few days this becomes a mass of crystalline fibres, which, separated from the mother liquor, are to be purified by solution, digestion with animal charcoal and re-crystallization. Or we may obtain salacine from a cold aqueous infusion of fresh willow bark, by continuous evaporation.* Salacine, when pure, is white, very bitter, crystallizes in silky needles and laminæ, is inodorous, neutral to vegetable colors, fusible at 250° F., more soluble in boiling than cold water, one hundred parts of which dissolve only 5.6 parts of salacine, soluble in alcohol, but not in ether or the volatile oils. It is not precipitated by any agent; oil of vitriol colors it blood red, and is its most reliable test. Chromic acid is also a good test of its presence, inasmuch as it converts salacine into *salicylous acid* (*oil of meadow-sweet*), *carbonic acid, and formic acid.*

Salacine was obtained by Fontana in 1825, though in an impure state. Leroux succeeded, in 1829, in procuring it pure. It has now been found in fifteen species of *salix*, eight species of *populus*, and in the bark, leaves and flowers of other trees. Sixteen ounces of the bark and twigs of the S. helix have yielded 251 grains of salacine, and the same weight of bark of the *S. pentendra* have yielded 300 grains.

Physiological and Therapeutical Effects—The willow bark possesses, in a considerable degree, all the virtues of the *astringent*

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* A good method for obtaining salacine is to macerate ℥ xvi. of willow bark in a mixture of ℥ ij. of lime, in eight pints of water; boil for half an hour. Repeat this twice with the residue. Concentrate the clear decoctions to two pints, digest with animal charcoal, filter and evaporate to dryness; next exhaust the extract with spirit containing 28 per cent of alcohol; distill off the greater part of the spirit, and leave the residue to crystallize. A second crystallization and digestion in animal charcoal purifies them. Sixteen ounces of the bark of *S. alba* yields ʒ v. of salacine by this process. All those species of salix which are very bitter contain salacine. But to determine the point with certainty boil ʒ j. of the bark in ℥ iv. distilled water; digest in the decoction ʒ j. of litharge, in fine powder; filter and precipitate the lead with sulphuretted hydrogen gas, then evaporate to f. ℥ j. If, in this solution, sulphuric acid produces a bright purple-red. salicine is present.

bitters; and these are not dependent on any one organic principle, but upon several, as *tannin*, *extractive*, *resin*, *salacine*, *populine?* &c. The most important tonics of this class are *cinchona bark*, *willow bark*, and *elm bark**—all combining bitterness and astringency in an eminent degree. In addition to the ordinary properties of tonics, they are known to control paroxysmal affections with greater certainty and promptness than those belonging to the other class of tonics. We may say of the willow bark, in general, that it is less apt to disturb the stomach than cinchona, but its tonic and febrifuge properties are less than the latter. Some writers ascribe to it balsamic properties, in common with the populus. It should be remarked that some of our native species have very slight medicinal virtue, containing, as they do, but little salacine and bitter extractive, but a large amount of gum and sugar (mannite). The bark and juice of the willow were recommended by Dioscorides as useful astringents; and every writer on materia medica, from that time to the present, has only repeated what this writer, and Theophrastus, Celsus and Galen have set down regarding its virtues. They all testify that it possesses excellent tonic properties, and is well adapted to the cure of intermittents. Experience also has established its reputation as a useful corroborant in atony of the digestive organs, in convalescence from acute affections, and in ordinary chlorosis, chronic diarrheas and dysenteries. We have found it of great service in scrofulous affections, and in relaxed and debilitated states of the system, passive hemorrhages, &c., where an astringent influence, conjoined with a tonic, is indicated. As the powdered bark of the willow is better borne than that of cinchona, and more acceptable to the stomach, it is often given in half-dram doses, as an ordinary tonic, three times a day, and in the quantity of one or two ounces, during a single intermission, in intermittents.

Salicin.—During the last twenty years salicin has nearly superseded the other preparations of the willow, although it does not possess the full antiperiodic power of the powdered bark. The salacine was brought prominently into notice in 1825, by Leroux, of Paris, and in 1826 a report upon it was made to the French

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* *U. alata*, *U. racemosa*, and *U. Americana*.

Academy of Sciences by MM. Gay Lussac and Majendie, which was the occasion of its general introduction into practice. Majendie states that his own experience of its effects in intermittent fevers is favorable, and that he has often seen three doses, of six grains each, stop the paroxysm. He quotes the experiments of MM. Miguel, Husson, Bally, Girardin, Cagnon, &c., at the hospitals, in its favor; they all agree in its anti-febrile power, and in stating that from twenty-four to thirty grains of salacine will arrest the return of the fever, whether quotidian, tertian, or quartan. The same testimony was borne by Buchner, in Germany, and Rigatelli, in Italy. We now know, however, that its praises as a febrifuge equal, if not superior, to cinchona, were greatly exaggerated. In 1832, M. Pelletier made numerous trials of salacine at La Charité, by which it appeared that, though very bitter, it was less active than quinine. About this period opinions regarding its efficacy were extremely various: while some extolled it as a remedy of great power, others claimed that it possessed no obvious febrifuge properties. To settle the question, M. Andral, in 1833, entered on an extended series of trials and observations in hospital practice, and came to the following conclusions:—1st. Salacine possesses febrifuge qualities, but in so small a degree that we ought not to hesitate a moment in preferring the sulphate of quinine. 2d. Salacine may be employed in any case where irritation or inflammation exists, contra-indicating the employment of sulphate of quinine, in hectic fevers with periodical paroxysms and abundant diarrhea, or where sulphate of quinine cannot be had. 3d. It is not only unnecessary, but injudicious, to employ it at the beginning in high doses. Six or eight grains, administered between the paroxysms, on the same principles as sulphate of quinine, produce as good, or even better, effects than higher doses, though, if necessary, the doses may be increased.

In the year 1845, Dr. Lawson, surgeon-general United States army, issued a circular to the surgeons of the army, together with a large supply of salacine to all the military posts, directing experiments to be made with it in the treatment of malarious fevers, in order to determine its true febrifuge and antiperiodic virtues, its proper doses, and, in short, its entire effects, with its *modus operandi*, &c. The replies to the circular, so far as we have learned, went to sustain the conclusions of Andral, as stated above, that in the treatment of intermittents it was far less reliable than quinine, and, considering the greater quantity required, was not less expensive, but that it was a valuable tonic in all cases where an antiperiodic effect was not desired, as in atonic dyspepsia, convalescence from acute diseases, &c. At present, the quantity of salacine used in the United States army is much less than it was a few years ago, quinine being the main reliance. Our own trials with it have satisfied us that in mild intermittents from twenty to thirty grains of salacine will arrest the paroxysms, and with about the same certainty as half the quantity of quinine; that it generally sets better on the stomach, rarely causing irritation, even in sub-inflammatory states of the organ; that it is better adapted to diseases of infants and young children where tonics are indicated, and to diseases generally where a mild tonic influence is desirable to be sustained for a considerable time. We have never known any injurious effect from it, even when given in large doses; no cerebral disturbance, as is witnessed from quinine, nor any derangement of the functions of special sense. It invigorates the digestive organs, while it does not derange the biliary function nor check the gastric or intestinal secretions. Our average dose has been about two grains, varying according to the circumstances of the case. Salacine has been a favorite tonic with the physicians of New England for the last twenty years, especially in the valley of the Connecticut River. Wholesale druggists in New York city have informed me that for many years their sales of salacine in the Eastern States exceeded those of quinine, and further inquiry led us to ascertain that it was the principal and favorite tonic relied on in that region wherever this class of remedies is indicated. Whether it is as generally employed at the present time, we have no means of judging: some circumstances, however, lead us to infer that other remedies have, to a considerable extent, superseded it.

Preparations, Doses, &c.: Powder, infusion, fluid extract, and salicine.—The *powder* is better borne by the stomach than cinchona and most other tonics. The dose, as an ordinary tonic, is from ten to fifteen grains; if it is used as a substitute for Peruvian bark in intermittents, it must be given in dram doses, so that from one to two ounces are taken during a single intermission.

The *infusion* or *decoction* is made with an ounce to the pint of water. Dose, one or two fluid ounces. From one to two pints must be given between the paroxysms of an intermittent, in frequent, divided doses. The decoction is a useful topical application in indolent, flabby, or foul ulcers. The *fluid extract* is not yet in market. It would have great advantages over either of the preceding preparations. *Salicine.*—This is the usual preparation now in use. It does not, however, combine all the virtues of the willow, as the *fluid extract* would, and probably is less efficacious as an antiperiodic, besides being much more expensive. When taken internally it gives to the urine the odor of salicylous acid, into which it is converted in its passage through the system. Dose, two to twenty grains.

The foreign species of salix in which salicine has been found are: *S. fissa*, *S. helix*, *S. amydalina*, *S. vitellina*, *S. incana*, *S. pentendra*, *S. alba*, and *russelliana.* It has also been obtained from populus *tremula*, *nigra*, *græca*, *angulata*, and *alba.* Our indigenous poplars nearly all contain salacine, and a large majority of our willows.

Iron and Its Preparations.

[CONTINUED.]

FERRI ARSENIAS (*Arseniate of Iron*).—Dose, 1-16th to 1-12th of a grain, made into a pill. According to Carmichael, this preparation acts more powerfully on the vitality of cancerous formations than any other agent, and the dead slough caused by it is much deeper than that caused by the application—which was at one time so much celebrated—called "Plunket's Caustic." He allows, however, that the greatest caution should be observed in its use. It has also been administered internally in cancerous affections and lepra, in lupus, lichen, elephantiasis, psoriasis and chronic eczema, and M. Duchesne Duparc feels authorized, from numerous facts accurately observed, in concluding, that a daily dose of a fifth of a grain, uninterruptedly repeated during the necessary time, is competent, in the adult, to effect the cure of an herpetic or squamous affection, however extensive or long established.

℞.—Ferri Arseniat,	ʒ ss.	
" Phosphat,	ʒ ij.	
Cerat Cetacei,	ʒ vi.	M.

This ointment must be spread on lint and applied to the ulcer.

The following formula may be used in cancerous and other affections:—

℞.—Ferri Arseniat,	gr. iii.
Ext. Gentian,	ʒ i.
Glycyrrhiz, pulv.	ʒ ij.
Syrup,	q. s.

Make a mass and divide into forty pills. Dose, one three times a day.

FERRI AMMONIO TARTRAS (*Ammonio Tartrate of Iron*).—Dose, five grains or more given in pill or solution. This salt has the general properties of the other ferruginous compounds. Its advantages are its ready solubility, palatable taste and permanency.

FERRI OXIDUM NIGRUM (*Black Oxide of Iron*).—Dose, five to twenty grains, two or three times a day. The oxide, from the formula of the Edinburgh College is a valuable chalybeate, having the merit of uniform composition and permanency under the influence of air and moisture.

FERRI PHOSPHAS (*Phosphate of Iron*).—Dose, five to ten grains. This preparation is the result of a double decomposition between sulphate of iron and phosphate of soda. It has been given with advantage in amenorrhea, and in some forms of dyspepsia.

℞.—Ferri Ammonio-chloridi,	grs. xii. to xx.	
Soda Sesquicarbonatis,	grs. xii.	
Ammoniæ Sesquicarbonatis,	℈j.	
Syrupi,	℥ss.	
Aquæ Distillatæ,	℥vss.	M.

Dose, ℥j., three times a day. In debility with acidity and flatulence.

℞.—Tinct. Ferri Sesquichloridi,	ʒji.	
Spirit Aetheris Nitric,	ʒij.	
Sacchari,	℥j.	
Aquæ,	℥v.	M.

Dose, two tablespoonsful twice a day,

℞.—Tinct. Ferri Amm.	ʒjss.	
Infusi Quassæ,	℥jss.	
Ammonia Sesquicarb.	gr. vi.	
Syrupi Aurantii,	ʒj.	
Aquæ Distillatæ,	ʒvii.	M.

Make a draught, to be taken two or three times a day. For hysterical women.

℞.—Ferri Citratis,	gr. xii.	
Syrupi,	ʒ iij.	
Aquæ Distillatæ,	℥ iij.	M.

Dose ℥ ss. three times a day. An excellent form for giving citrate of iron to children.

℞.—Ferri Ramentorum,	ʒ ij.
Iodinii,	ʒ vj.
Aquæ Distillatæ,	℥ xvj.

Put the iodine and iron in a bottle, then add the water, and having shaken them well together, keep the bottle in a warm place for three days. Lastly, pour off the clear solution and keep a coil of iron wire suspended in it. Dose, fifteen minims to one fluid dram thrice daily, in a little aromatic water with syrup.

℞.—Ferri Sulphatis,	grs. xii.
Acidi Sulph. Dil.	ʒ j.
Tinct. Cardamomi Comp.	℥ ss.
Infusi Rosae Comp.	℥ vss.

Dose, two tablespoonful two or three times a day.

Datura Stramonium.

(THORN-APPLE.)

THE Datura Stramonium, like many other plants, has received a variety of different names in different places. In the Southern States it is commonly called Jamestown weed, because a number of sailors were once violently diseased by ignorantly eating the boiled plant at Jamestown, in Virginia. It is called French chestnut in New Jersey, probably from the resemblance which its pod bears to that of a chestnut. It is sometimes vulgarly called stinkweed, from the disagreeable odor which it emits. But it is most generally known by the name of thornapple.

Taken in a moderate dose, stramonium produces light vertigos, and a slight disposition to sleep; muscular energy is diminished; the sensibility is weakened; dilatation of the pupil, slight difficulty in the vision, acceleration of the pulse, increase in the heat of the skin, thirst and burning in the throat; the urine is secreted in greater quantities; perspiration, when there is neither diuresis nor diarrhea. But in larger doses, vertigos, feelings of prostration and general weakness, light stupor, soon trouble in the vision, enormous dilation of the pupils, spasms, intense agitatation, furious delirium, continuous hallucinations, obstinate wakefulness, high fever, a dry, hot skin, oftentimes covered with a scarlatinous eruption; ardent thirst, dryness, and very painful constriction of the pharynx; frequent impossibility of swallowing; vomitings, diarrhea, constant desire to urinate, but little or no urine. When the intoxication has become fatal, collapse succeeds the agitation, chilliness, and at last death. When the poison has not proved fatal, these formidable symptoms subside, with the exception of the dilatation of the pupils, the obscurity of vision, while often a passing blindness ensues. This delirium and blindness continues, sometimes many days, and even many weeks. The delirium is never gay, never sad; but singular hallucinations, fantastic visions, always accompany it: it is this which has given to stramonium and belladonna the name of the *sorcerer's plant*, *devil's herb*, because, in the ages of superstition and ignorance, the pretended sorcerers used them to produce on their poor patients the fantastic hallucinations they were wont to practice when on the midnight vigils, and gain thence the prestige of being possessed of superior power; it is by this same means that the sorcerers and enchanters procured to lovers their imaginary pleasures. With a species of datura, the Indians, under the name of *bangues*, the Arabs and the Turks under the name of *mashac*, prepared their amorous philters. The women of India make of the datura a beverage to administer to their husbands, not to excite their desires, but to deceive their vigilance when suspicions may have been excited. The judiciary annals contain a famous process instituted against a company of thieves, known as *cajolers*, who mixed powdered stramonium seeds with tobacco, then placing themselves on either side of those to whom they frequently offered the mixture, easily robbed them when they became giddy and delirious.

In the treatment of poisoning by stramonium, the first indicacation is not to leave any of the poisonous substance in contact with the absorbent surfaces; so that vomiting and purging will always be desirable when the poison is contained in the stomach and alimentary canal. Acids, cold drinks, cold baths, and opium will be used with advantage for calming the nervous symptoms that supervene, taking care not to administer these acid drinks till the greatest quantity possible of the poison has been expelled by vomiting.

Storck has the credit of first bringing into notice the active properties of the datura stramonium. With it he treated five cases: two cases of lunacy, both of which were cured; one of chorea, which was aggravated by the treatment; and two cases of epilepsy, which were only temporarily modified. A number of cases are on record, confirming the utility of stramonium employed in insanity as well as tetanus; but the use of stramonium in nervous diseases, such as mania, epilepsy, chorea, has not always proved successful in the hands of the most part of the physicians who have made trial of it in these cases; however, its incontestable efficacy in the treatment of asthma and neuralgia places it in the rank of those agents on which reliance can be placed.

The custom of smoking stramonium is a common one among the Orientals, and was imported into Europe by Dr. Anderson, physician in Madras, in 1802. This mode of treatment has had many and extensive trials in the European hospitals since, and with such success that a late author of eminence considers himself authorized in proclaiming the certain and remarkable efficacy of the datura stramonium employed and smoked in cases of asthma; "if, by the word asthma, we do not understand a permanent difficulty of respiration, allied to an organic lesion of the organs of circulation or of respiration, but only a dyspnœa often extreme and essentially intermittent or remittent; a dyspnœa that does not imply any appreciable material lesion of the heart or lungs; a dyspnœa wholly nervous, but which can sometimes manifest itself as a symptom, accessory and not necessary, in the various organic affections of the chest."

Among the spasmodic affections of the respiratory organs, the hooping-cough holds a place in the first rank; the success obtained by the administration of belladonna in this malady, induced practitioners to prescribe stramonium in the same cases, and with equal advantage. It is the same for all the nervous diseases which are or are not accompanied by organic lesion of the larynx or of the chest.

The employment of stramonium in the treatment of neuralgia is now among the most efficacious modes of managing that disease, and one whose usefulness is, perhaps, least to be doubted. We have reports of a number of cases of tic-douloureux cured by administering the tincture of stramonium, in doses of four or five drops, every three or four hours; of a severe case of sciatica cured in three weeks by giving a grain and a half of extract of stramonium each day, and others to like purpose. It is efficacious in tic-douloureux of the face, and in treating osteocopal rheumatic pains. Kirchoff employed the tincture of stramonium by friction on the passage of the affected nerve; he applied the frictions ten or twelve times a day on the diseased part, and continued them some time after the cure of the disease. He cites four remarkable cases to prove the efficacy of this treatment, the last of which had existed for nine months.

Complete success has been obtained in the treatment of inter-articular rheumatism and chronic articular rheumatism, as well as in the chronic sciatic form, by administering pills composed of one-tenth of a grain of stramonium and opium. It is well to give these pills from two to ten each day, until a sensible effect has been produced upon the vision, and continue to employ them from fifteen days to a month, even after the entire disappearance of the malady.

Dr. T. G. Rademacher says: "I have used it in brain-fever with remarkably good success, as it immediately relieves the unfavorable symptoms, and cures by its continued use. At first it was a difficult matter to ascertain the quantity in which it should be given, and knowing it to be a powerful remedy I was compelled to proceed cautiously. I found that in general I needed about a dram of the tincture in twenty-four hours. Occasionally, when the pain was excessive, I have increased it to one and a half drams in the course of the day. After a number of experiments I found the following mixture to answer all the indications, and have often used it in such cases with marked effect:—

℞.—Tincture of Acetate of Iron,	**1 ounce.**	
" Stramonium Seed,	**1 dram.**	
Gum Arabic,	**1 ounce.**	
Water,	**8 ounces.**	**M.**

Of which I directed the patient to take one tablespoonful every hour. In some cases its use has been followed by diarrhea, when I combined with the above half an ounce of the spirit of nicotine. Many bad effects have been attributed to this agent, but I have used it in brain fever so extensively that had it exerted, in sanitive doses, any injurious effects upon the organism, I should not have failed to discover it. In only one case did this dose appear too large, and that in a lady of a peculiar nervous, irritable temperament, in whom it produced slight convulsive movements of the arms. In many experiments upon myself with this tincture, I found that it produced only a remarkable dryness of the mouth. I think it, in proper doses, a valuable agent in these cases of brain fever, accompanied with much pain, as it has been peculiarly successful in my hands when given in the proportion of a fluid dram during the twenty-four hours."

Dr. Ashby, in the Atalanta *Journal*, gives great credit to stramonium in the treatment of dysmenorrhea, which he thinks should be called membranous menstruation. He was led to the use of stramonium by the successful practice of Dr. Dears, who derived his information from Dr. Eberle, who is persuaded that we possess no other article which can at all be compared to it as a remedy in this affection. He gave the extract in doses of one-eighth of a grain, three times daily, beginning four days before the expected return of the attack. Dr. Ashby gives one-fourth to half a grain, three or four times a day, or such doses as will produce a desired constitutional influence, with dilatation of pupils, accompanied by aloetic and mercurial cathartics, and full doses of morphine and camphor, with hot fomentations, &c. In general, he has been successful; but truth and honesty require him to state, that a few cases have occurred in his practice, where he prescribed stramonium with entire confidence, in which it has utterly failed.

Dr. Wood says: "Externally this medicine is used advantageously as an ointment or cataplasm in irritable ulcers, inflamed tumors, swelling of the mammæ, and painful hemorrhoidal affections. Dr. J. W. Dortch, of North Carolina, has found it very useful in tinea capitis."

"In combination with quinia it forms an invaluable preparation, which has been found exceedingly beneficial in intermittent fever, all periodic pains, headache, dysmenorrhea, delirium tremens, &c. In phlethoric habits, and in patients with determination to the head, stramonium must be administered with caution, keeping the excretory organs, as the skin, kidneys and bowels, in an active condition during its employment."—*J. King.*

Dr. Alex. King describes the operation of this medicine as "moderately diuretic, and impregnating the urine with the smell of the seeds. It is cooling, anodyne, and sedative. It relaxes the tone of the solids, lessens the contractile force of the arterial system, and, consequently, moderates the violent attrition of the circulating fluids against their containing vessels; lowers the pulsation of the arteries, and renders the pulse lower, more uniform and equable, when excited by violent stimulants."

The action of stramonium has several times above been compared with that of belladonna. They both belong to the natural order Solanaceæ, which embraces a large number of plants of varied characteristic properties. Of those that are used in medicine, some are powerfully narcotic and poisonous, such as belladonna, mandragora, datura, hyoscyamus, nicotiana (*tobacco*); some are possessed of similar properties, but in very much less degree, such as the physalis alkengi and dulcamara; while others are eatable, as the boletus esculentus, solanum tuberosum (*potato*), and the solanum melongena (*egg plant*). The solanaceæ, placed in the first category, are all poisonous, and produce on the healthy and diseased organism effects identical in character; and indeed, belladonna, stramonium, and hyoscyamus produce on both men and the lower animals the same poisonous and therapeutic effects, and this, too, without any difference in the doses; in a word, it seems that they contain one common principle, *solanine;* for example, as the cinchonas contain *quinine*, and that the proportion of the active principle varies only according to the genera and the species. It cannot, however, be denied but that certain genera exert a special influence on certain pathologic conditions, as, for example, stramonium is more efficacious in the treatment of asthma than belladonna or tobacco; but the differences are so minute that they disappear in the generality of cases. It is not altogether with tobacco as with the rest, for to all the properties of the other poisonous solanaceæ, it joins some special properties, due to a very deleterious principle peculiar to itself.

In addition to what has been given above to be used as antidotes to stramonium in cases of poisoning, we append the remarks of Dr. L. E. Miller, from the *College Journal:*—

"In cases of poisoning by stramonium, an emetic and purgatives should be given immediately, after which may be given vinegar and water as a drink, vinegar clysters, tannic acid, coffee, sinapisms to the region of the stomach, to counteract as soon as possible the approaching apoplectic symptoms. Among the antidotes of narcotic poisons, tannic acid holds an important rank, as it combines with the alkaloid containing the poisonous matter, thereby forming an innoxous compound. It would, therefore, be well, immediately after the operation of the emetic, to give a decoction of China-oak, willow bark, or a tincture of gall-nuts, or of Chinese tea, which contain large quantities of tannic acid. For the nervous symptoms many remedies are of use, as camphor, valerian, muriate of ammonia, musk, ether, sinapisms, &c.; cold applications and foot-baths are of excellent service to prevent local congestions. Sour whey has been very highly recommended after the action of an emetic."

"Bouchardat recommends iodine; A. Garrod, animal charcoal in large quantities."

In epilepsy it has been employed with varied success. Dr. Archer, of Maryland, states that his experience confirms its use when the fits occur at short intervals, and periodically; and therefore afford time to bring the patient under the narcotic influence, before the commencement of another paroxysm. When the intervals are of irregular length, Dr. Archer found the treatment was less successful. Dr. Woodward states that in many cases in which the paroxysms of epilepsy have recurred frequently they have, for months, been wholly suspended by use of tincture of stramonium. It rarely makes any favorable impression, unless it is used in sufficient doses to dilate the pupil of the eye slightly, and produce some difficulty of vision, more or less of the time.

Dr. Stillé says it is possible that a want of regularity and attention in administering the medicine may account for its failure in epilepsy when used by other physicians, for in the observance or neglect of these elements of treatment lies the secret of a thousand conflicting reports of the virtues of remedial agents.

[*To be continued.*]

Hydrastin and Leptandrin in Biliary Derangements, &c.

By R. J. Hemstreet, of Poland, N. Y.

I have, for the past two years, been in the habit of prescribing the following formula in biliary derangements, with great success:—

℞.—Hydrastin,	gr. j.
Leptandrin,	grs. ij. to iij.
Podophyllin,	grs. ss. to j.
Sub-Carb. Soda,	grs. ij. to iij.

To be taken once in four hours, until free catharsis is obtained, or, where the case is not urgent, one at bed-time, and in case it should not operate freely by morning take another.

In dyspeptic cases, I have found the following preparation to act beautifully as a laxative:—

℞.—Leptandrin,	grs. iij.
Calcined Magnesia,	grs. v. to vi.

To be taken at bed-time. It acts gently, producing no uneasiness, at the same time corrects acidity.

I had a severe case of dyspepsia last spring and summer. It had been of long standing, and the patient was greatly emaciated, being unable to retain scarcely any food upon the stomach, with great torpor of the bowels. I put her upon the above formula, as a laxative, administering through the day the following:—

℞.—Hydrastin,	gr. j.
Sub-Carb. Soda,	grs. ij.

To be taken before each meal—quieting the nervous system with a pill of equal parts of Tilden's extract of valerian and symplocarpus fœtidus.

She is now able to eat and digest a good meal of beefsteak, good bread, potatoes, &c., and, so far as indigestion is concerned, she is quite well.

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M. Bean, an hospital physician, of Paris, has found that workmen who handle lead do not suffer from phthisis, and that the progress of this disease has been stopped by symptoms of lead poisoning.—*Southern Med. and Surg. Journal.*

Podophyllin and Leptandrin as a Substitute for Mercurials in Diseases of the Digestive Organs.

By Jared P. Kirtland, M. D., of Cleveland, Ohio.

Habit, and occasionally a favorable result, too frequently establish the use of mercurials as a routine in disorders of the digestive system, embracing the liver, stomach, alimentary canal, and to some extent the whole glandular structure.

That those preparations are often the most certain and potent means for correcting such disorders, is not to be denied; and I most certainly shall not assume the province of the professional demagogue to decry their use. It should, however, be recollected that the best of remedies, injudiciously employed, will establish factitious disease, and that very many cases of hepatic and digestive derangements, organic and functional, can be traced, for their origin, to an indiscriminate or too long-continued use of mercurials.

Such practice is liable to result in establishing an artificial action, which can only be sustained by a repetition of the same course of means. This artificial condition becomes as imperative in its demands for repetition as does the abnormal thirst for alcohol with the inebriate.

For the practitioner to be able to avoid such evils is a desideratum which I hope and believe to be attainable.

During the last two years I have, in a great measure, dispensed with the use of calomel and blue mass in diseases of the afore-named system, and have substituted therefor a combination of the resinoids of two indigenous plants, to wit: podophyllum peltatum and leptandra virginica.

The former of these has long been known in popular practice as the May-apple or mandrake, and its medicinal virtues have, perhaps, been more correctly estimated by irregulars than the regular profession.

Standard authors who have noticed it have copied, one from another, a tissue of errors in regard to its properties, till it is now generally considered to be a mere drastic cathartic, resembling jalap in its action. Experience has demonstrated to me that in moderate and suitable doses it is not drastic, but operates mildly, extensively, and equally on the whole alimentary canal; at the same time it is as certain to reach the liver and bile-cyst as is an equivalent dose of calomel, without inducing the sickness and depression which often attend the use of mercurials under such circumstances.

The brief treatise on this vegetable, in Wood & Bache's Dispensatory (8th edition), pages 556, 7 and 8, contains some valuable truths, with at least an equal amount of error. The reputation of the podophyllum has been established by its abuse rather than judicious employment, a matter to which I shall again refer.

The latter, the leptandra virginica of modern botanists, was formerly known as the veronica virginica, and in domestic medicine as the colored physic root. I frequently prescribed it, forty years since, and more frequently observed its effects employed as a laxative and cathartic, as it then was extensively used by mothers and nurses in bowel complaints of children. It seemed in its impression to resemble somewhat ipecacuanha when administered in small and repeated doses; perhaps less nauseating and diaphoretic, and more laxative.

Both of these plants when prescribed in the form of either decoction or powder of the roots are objectionable, tending to offend the stomach: more from the stimulus of quantity than any medical quality. Modern chemistry and pharmacy have, however, obviated this objection, by furnishing their active principles in a concentrated form, which can be used in doses so small as not to offend the most sensitive stomach, and at the same time as powerful as the case requires.

My usual prescription for a laxative and aperient, as an equivalent for one or two grains of calomel or five grains of blue mass, is the following:—

℞.—Podophyllin,
Leptandrin, ... *aa.* gr. x.

Mix thoroughly; divide into forty powders. Dose, one powder at bedtime; repeat as occasion may require.

Ale, coffee, or catawba wine forms a convenient and palatable vehicle.

The combination of these two articles was first suggested to me by my friend H. B. Wilcox, M. D., of La Porte county, Indiana.

It will not be attempted in this communication to specify all the various morbid conditions of the human system in which the above prescription may be employed, nor the modifications and combinations with other agents that may be resorted to by the skillful practitioner to meet individual cases. All this he will readily discern from his knowledge of general principles.

The term *deobstruent*, to designate a class of remedies, is obsolete, yet the above combination of active medicinal principle seems in practice to entitle it to a place under such a head. It is milder, and at the same time more certain to bring into a healthy and active operation every part of the glandular system than any means of my acquaintance. Hence its use is readily suggested in deficient or vitiated secretion of the liver, kidneys and uterus, with their associated morbid conditions.

A caution in regard to the dose of these agents, either single or combined, experience shows us to be requisite. On a recent occasion, an intelligent physician was condemning the podophyllin as a harsh, drastic and irritating cathartic. The query was put to him, "In what dose do you administer it?" The reply was, "About two grains; but I do not trouble myself to weigh such articles."

Dr. Zimmerman's chapter "On False Experience in Medicine" is invaluable. It might be extensively illustrated with instances like the above.

One grain of opium is a safe narcotic for an adult requiring such an article; but eight grains would destroy the same individual.

One-fourth of a grain of podophyllin, mixed with an equal amount of leptandrin, is a full dose for a laxative, but if multiplied by either four or eight, the remedy becomes drastic, harsh and irritating.

Then, again, the practice of portioning out by the eye these potent agents is unsafe. The eyes, fingers, and judgment of the most experienced may err; but his well-balanced scales, like figures, will not deceive.—*Cleveland Medical Gazette.*

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Veratrum Viride in Cases of Children.

By E. J. Oliveros, M. D., of Glasgow, Ga.

The propriety of using tincture of veratrum viride, in cases of children under two years old, is a question that has long been mooted by professional characters; and at the present day, at least in this section of Southwestern Georgia, when the action of that medicine is urgently and strenuously called for, the parents tell you that Dr. so-and-so says it is certain death when given to children, indiscriminate of age.

Let their assertions be as they may, practical experience has proven to the contrary.

For the past few years I have had numerous cases among children with which to contend. Some of them were of a highly inflammatory type, with the pulse ranging from 150 to 160, and the most certain remedy I have ever tried in controling the excited circulation was the tincture of veratrum viride. It did not only quell the agitated pulse, but it most generally checked the disease in its very commencement.

I have had considerable experience in the administration of tincture of digitalis in inflammatory diseases, with very beneficial results, but yet I cannot speak with as much confidence of the latter medicine as I can of the former.

The tincture of veratrum viride, I must confess, should be given with discretion and much discriminating judgment.

It is a powerful remedy, and should be used by those only who are fully informed as to its effects. What is potent for good is also potent for evil.

Oftentimes these powerful medicines fall into the hands of charlatans and empyrics, who, laboring under the vain delusion that capital may be made under the fictitious name of some nostrum, they possessing as little judgment as brains, give it until complete prostration takes place; the pulse falls to an almost inappreciably low number of beats; coma supervenes, and the result is death.

I think our medical code, as well as legal statues, should make suitable provisions for such impostors, who, under the garb of philanthropy, lurk about, and by smooth parleying and bombastic language lead the credulous and uninformed astray.

In the administration of tincture of veratrum viride there is a peculiarity that I have not seen noticed by any of our writers. It is this: When the pulse of an infant ranges from 150 to 160 beats to the minute, and the veratrum is administered in doses according to the age and idiosyncrasies, very frequently the pulse does not lessen in frequency; the patient becomes pale, with flabby muscles, and with a profuse perspiration. It is then the inexperienced becomes alarmed, and believes his patient is tending to fatal collapse. And just so would it be were not the proper counteracting remedies given. While you will observe all these dangerous symptoms supervening, pulse quick, &c., &c., you will discover that its volume is measurably lessened, and now is your time to administer some stimulant, such as brandy or syrup of ginger; I prefer the brandy. Give it in small doses, at intervals of from three to five minutes, until you perceive a change in the pulse.

Under such treatment, you will find the pulse lessening in frequency and increasing in volume, fever subsiding, all symptoms assuming a favorable tendency, and your patient getting better. I have experienced this beneficial action so often, that I rely with great confidence on the use of tincture of veratrum viride in cases of children suffering from inflammatory affections, more especially pneumonia.

I would reiterate, however, that this medicine should always be administered under the advice or supervision of a physician.—*Oglethorpe Medical and Surgical Journal.*

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Extract of Hemlock (Conium Maculatum) in the Treatment of Gonorrhœa.

By A. H. Stephens, M. D., of Camden, Ohio.

I am induced to give the public, through your columns, my experience in the use of that very old remedy, hemlock, in the treatment of that very unpopular (in this locality at least) disease, gonorrhœa! hoping that some of those more *favorably* located, more familiar with the disease, and, of course, better qualified than myself, may be led to investigate and report the result of such investigation, that the profession at large may become better acquainted with the therapeutic properties of this very important remedy.

Case 1.—B——, aged 27; of sanguineous temperament. Applied Feb. 2d, three days after a suspicious intercourse. Complains of burning and pain in micturition; some tenderness of testicles. Running the finger along the urethra, from perineum to the glands of the penis, I forced out about half a teaspoonful of thick yellow pus, characteristic of gonorrhœa. Directed

℞.—Potassæ bitart.,.............................℥ ii.
Potassæ nit.,.................................℥ ss.
Ant. et pot. tart.,.............................gr. ii. M.

Sig. Take a teaspoonful three times a day. Use argent. nit., gr. ii.; aquæ, f℥ i., as a wash for the urethra.

The medicine produced free purging, considerable nausea, and in four days reduced somewhat the acute symptoms, changing the discharge to a thin, transparent fluid, moderating the pain and frequency of micturition. He was then placed on the usual "teaspoonful three times a day" of copaiba emulsion, which he used for ten days, without any amelioration of his "troubles," save a thickening-up of the discharge to about what it was at the commencement of the disease. At this time my attention was called to a communication of Dr. Staats, of Albany, recommending the hemlock, and I determined to test it in this case. He accordingly took ext. conii. ʒ ii., divided into twenty pills—two every two hours, discontinuing the local wash of nit. argent. In forty-eight hours the discharge diminished one-half; but the giddiness and distress complained of induced me to reduce the dose one-half, which he continued taking for two days more, when the discharge ceased, and the urethra appeared perfectly clear of inflammation. And now, three weeks after discontinuing the medicine, he says he has no trouble whatever, and is perfectly well.

Case 2.—H——, aged 40. Applied three weeks ago. A case of ordinary gonorrhœa. Had been using for a week previous to applying copaiba and cubebs, with injections of zinc and morphia, without any benefit. I placed him at once on the use of gr. xii. ext. conii every two hours, discontinuing all other medicines. In three days the discharge diminished materially, and in five days the man reported himself entirely well.

Case 3 was a case of rather more than an ordinary amount of inflammatory symptoms. After a free purging with calomel and compound powdered jalap, he was given the ext. conii, in the usual dose of gr. xii. every two hours. The discharge diminished gradually from the first day until the sixth, when the patient was perfectly cured.—*Medical and Surgical Reporter.*

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Iodide of Potassium in the Treatment of Iritis.

By J. C. Wordsworth, Esq., Asst. Surg. Royal London Ophth. Hospital.

An extensive trial of iodide of potassium has led me to the conviction that a safe and speedy cure of iritis can generally be effected by it alone; but it must be admitted that instances occur, now and then, that resist its influence, and can only be subdued by the administration of mercury in addition. On the other hand, it may be safely stated that a combination of both will often accomplish a cure in less time, and at less sacrifice, than either mercury or iodide of potassium alone. I have known iritis occur when the patient has been under the specific action of mercury, and at once subside on giving the iodide of potassium. In other cases, the disease has appeared during a course of the iodide, and succumbed to mercury. I have, therefore, been led to adopt the plan of combining the two remedies, when I have found that either does not quickly produce the desired effect. It has occasionally happened that a considerable augmentation of pain has ensued on the use of the iodide; and in other instances, where it alone has been adopted, though all the other symptoms of the disease have rapidly subsided, the impairment of vision has continued for some time: under these circumstances I have administered a few doses of mercury, with decided advantage.

As a matter of experience, as well as of theory, I should be indisposed to trust to the iodide alone, when the exudation exhibits a tendency to organization by assuming the nodular form, or by closing the pupil, and so leading to synechia or opaque capsule. Perhaps, too, as a rule, its sole use should not be adopted, if possible, when vision is from the outset of the attack much compromised.

I have observed, on many occasions, a decided advantage follow its use, when the skin has quickly become affected by scaly or papular eruptions.

On the other hand, it has seldom succeeded if there has been much prostration of strength or syphilitic cachexy; and in rheumatic iritis, bark and soda, or quinine, will be generally more efficient when the disease is associated with debility.

In conclusion, then, I believe that the iodide of potassium cannot supersede mercury in the treatment of iritis, though it affords an excellent substitute in cases for which mercury is not admissible, either through some idiosyncrasy of the patient, or when the specific influence of the mineral has been already attained; that in others its combination with mercury will greatly expedite the recovery, and save the patient from the necessity of such a prolonged course of mercury as would seriously compromise the general health; and, lastly, that in a large proportion of these cases the iodide will of itself suffice to effect a cure, especially when assisted by leeching and blisters.—*Medical Times*, and *North Amer. Med. Reporter*.

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A Botanic Garden Near Philadelphia.

A few weeks ago, in referring to the obligations under which the public lay to medical men, not only for the establishment of benevolent institutions, but also for those designed to advance the arts and sciences, we spoke of the Polytechnic College and its founder, our townsman, Dr. A. L. Kennedy. We are happy to announce that the same gentleman has prepared a bill, which has received the sanction of the Legislature and State Executive, and become a law, whereby a botanic garden is to be added to the other scientific attractions of Philadelphia and vicinity. The bill incorporates a company with a capital of $50,000, to be divided into a thousand shares of $50 each, and confers upon the corporators all needful powers for "the ownership and establishment of a model farm and botanic garden, and for the proper management and maintenance of the same."

Upon the model or experimental farm are to be determined and illustrated, by carefully conducted experiments, "the relative adaptedness of soil to crop, the best methods of cultivation, the worth to stock, of different varieties of food and methods of feeding, the comparative value of breeds of stock, and the means of preventing and treating their diseases." A limited number of agricultural students will be received on the farm, who, with the agriculturist at their head, will form one household, enjoying the accommodations and engaged in the pursuits of the diligent and intelligent country gentleman. The expenses of a faculty of science at the farm will be avoided under an arrangement with the Polytechnic College, by which the students at the experimental farm will be admitted to the lectures, practical laboratory instruction, and all the scientific privileges of the college, in the forenoon, on several days in the week, returning by railway to the farm in season for dinner.

The botanic garden will comprise hot-houses, green-houses, and "an extensive and scientifically classified collection of growing plants," and will also be used in testing the "practicability of acclimating useful and ornamental foreign plants." Dr. Kennedy, who was a pupil of the younger Jussieu, and a companion of that distinguished botanist in his herborizations, formerly gave, with each returning spring, a course of lectures on botany, to medical students in this city. We hope to see such a course revived this season, as the science should form an important part of the education of every physician. We, moreover, feel assured that medical plants will occupy their proper and prominent position in the botanic garden, and that every facility will be afforded whereby medical students may avail themselves of its advantages.—*Phil. Med. and Surg. Reporter.*

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Selections.

TURPENTINE IN HÆMOPTYSIS.—There are several well-known remedies which justly enjoy a high reputation for arresting attacks of hæmoptysis, and amongst them may be mentioned acetate of lead, gallic acid, and dilute sulphuric acid. These we see commonly employed, and almost invariably with success. From some cause or other, however, they will sometimes fail, and our reliance must be placed upon some other astringent and styptic, which shall have the power of effectually checking this slow form of bleeding from the lungs. The oil of tupentine is, perhaps, one of the best, next to those we have mentioned, and when properly administered can be relied upon. We lately observed two cases of hæmoptysis in the Charing-cross Hospital, under Dr. Willshire's care, which continued obstinately persistent, in spite of the free use of acetate of lead firstly, then gallic acid, and thirdly dilute sulphuric acid. One patient was a young man, aged twenty-one years, who has had several recurring attacks of this symptom; he was admitted on the 28th of November. The hæmorrhage was stopped only when the oil of turpentine was administered in doses of twenty-five drops three times a day, in a little syrup and water. The other patient was a female, at first in the surgical wards under Mr. Hancock's care; she had had a breast amputated, which was followed by intense congestion of the lungs, with hæmorrhage. She was now transferred to Dr. Willshire's care, and after taking the other remedies in full doses without effect, the turpentine completely controlled the bleeding, and she is gradually improving. The efficacy of turpentine is well-known in hæmorrhages from the urinary passages, and also from the uterus—that is to say, in their passive form; and as it exerts a specific and peculiar influence upon mucous surfaces generally, we may look for good results in other parts of the body, of which the bronchi are most certainly not the least important.—*London Lancet.*

REMARKS UPON THE MEDICINAL PROPERTIES OF THE BLACKBERRY ROOT.—The blackberry root has been long employed in both professional and domestic practice as a remedy principally in disorders of the bowels. Dr. Cyrus S. Sneed, of Culloden, Ga., in a short article in the *Southern Medical and Surgical Journal*, speaks of its remedial virtues. Dr. Sneed thinks that it is an error to suppose that its usefulness in disorders of the bowels depends principally upon the tannic acid it contains. He believes that its most powerful effects in those affections are attributable to the bitter stimulant or tonic extract, distinct from its astringency, the latter having no more effect than ordinary vegetable astringents. "In order to obtain this extract separate, the root when taken from the earth should have its bark immediately grated, and cold water applied to it. Like a great many other vegetable astringents, in this process tannic acid is retained in the bark, whilst the bitter principle is extracted by the water. * * A small quantity of this fluid taken into the stomach increases the appetite, and, at times, I find, produces a glow over the surface of the body, which induces me to believe that its therapeutic action is stimulant rather than tonic, as stated by most authors. I have found this preparation to produce some of the most extraordinary cures in chronic diarrhea and dysentery, and even in cases where all other remedies failed, and in the shortest possible time. The remedy prepared according to the method prescribed above has a decided advantage over the astringent preparation of the same root. The latter should be used with the greatest caution, lest, by suddenly checking the discharge from the intestines, anasarca be produced. The remedy, prepared as proposed above, should be given in small doses, five or six times a day. There is hardly any danger of its producing costiveness."—*Journal of Rational Medicine.*

INJECTION OF THE SULPHATE OF ATROPIN ALONG THE TRACK OF THE PNEUMOGASTRIC NERVE IN ASTHMA.—The Maryland and Virginia *Med. Journal* quotes the following from the *Moniteau des Sciences*:—"The last Paris novelty consists in this treatment, by M. Courty, of the paroxysms of asthma in a case which had resisted a great variety of medicinal agents. He injected along the track of the pneumogastric nerve, on the inner side of the sterno-cleidomastoideus and on a level with the thyroid cartilage, six drops of a solution of the sulphate of atropin, which produced vertigo, dilatation of pupil and other symptoms of narcotistation. Next day the injection was repeated on the other side, and thrown in more deeply, with the effect of producing still greater, though not alarming narcotism. A third injection, two days after the last, completed the treatment—the asthma having gradually diminished, and now, four days after the first injection, entirely ceased. The patient (a lady, aged fifty-four), continued quite well two months after the treatment had been put in force.—*St. Louis Med. and Surg. Journal.*

OPIUM AN ANTIDOTE FOR BELLADONNA.—Dr. Lopez, of Mobile, mentions in the *N. A. Medico-Chirurgical Review* a case of poisoning from belladonna, successfully and speedily relieved by opium—thus showing the complete antagonism of the two poisons. The suggestion was derived from the practice of Dr. Graves, of Dublin. When belladonna is freely used its toxic effects are not uncommom, and it is important to bear in mind this simple antidote.—*Ibid.*

ATROPIN IN EPILEPSY.—Dr. Maresch, physician to a lunatic asylum in Virginia, states in the *Medical Times and Gazette* that he succeeded admirably in the treatment of epilepsy with atropin. Of eight females three were cured entirely, and the condition of the remaining five greatly improved. Other statistics equally favorable are given. One-fifteenth of a grain of this remedy produces dryness of the throat, difficulty of speech and aberration of vision—some idea of the dose may be gathered from this.—*Ibid.*

CHLOROFORM AS A HYPNOTIC.—Opium and lactucarium are almost the only two agents which induce sleep by a special sedative action; and they both have their inconveniences as well as their highly valuable properties. A hypnotic without these inconveniences would prove an agent of great value, and M. Fonssagrives, of Cherbourg, believes that chloroform is that agent, judging from his having used it with constant success since 1854, when it was recommended by Dr. Uytterhaven, a Belgian practitioner. Sleeplessness arises from different causes—sometimes it is the result of the persistence of a painful symptom which forcibly excludes repose; at others it constitutes an entirely nervous symptom originating in some moral sufferings, absorbing preoccupation, or too prolonged or too active intellectual exertion; while at other times it proceeds from a vicious habit of the cerebral centre becoming a cause of sleeplessness; or finally, the sleeplessness may result from the abuse of hypnotic remedies, or may be an epiphenomenon of certain acute diseases. It is in these latter cases that chloroform is of especial service. The dose is small but effectual, viz: from five to ten drops.—*Bulletin de Thérap.*

TREATMENT OF TRAUMATIC TETANUS BY APPLICATION OF ICE TO THE SPINE.—Dr. B. B. Carpenter, of Suffolk county, N. Y., states that in 1833 he published two cases of traumatic tetanus successfully treated by ice, and that since that time he has similarly treated fourteen cases with like result, except in one instance. His cases occurred in persons of good constitution and temperate habits. As specimens of the results of his treatment in the sixteen cases, he now publishes two examples, one of the acute and the other of the chronic form of traumatic tetanus. It is a common and fatal disease during the warm months in the part of the country where he lives.—*N. Y. Journal.*

Pharmacy.

EFFERVESCENT SOLUTIONS OF CITRATE OF MAGNESIA.

Messrs. Vuaflart, Dalpiaz and Lefort have reported to the Paris Pharmaceutical Society on the above subject. They propose solutions of five different strengths, prepared from citric acid and carbonate of magnesia, in the proportions respectively of 19: 12—25: 16—28: 18—32: 21—36: 24 grammes, which will form lemonades containing respectively, 30, 40, 45, 50 and 60 grammes of crystallized citrate of magnesia. The modus operandi is copied from Mr. Lalouet, and is as follows:—3⅛, 4⅛, 4 4-5, 5½, or 6⅛ drams of carbonate of magnesia, according to the strength intended for the solution, are rubbed up in a porcelain mortar with a twenty-fold weight of water, and poured in a mineral-water bottle; the acid in the respective proportion of 3, 4½, 5⅛, 6⅕, or 7⅜ drams is added in crystals, the bottle well corked and tied over, and set aside for from six to ten hours. After that time the magnesia will have been taken up, though a slight cloudiness renders filtering advisable; therefore the solution of citrate of magnesia, which is strongly impregnated with carbonic acid, is filtered into another bottle (citrate-bottle), in which are two drams of citric acid in crystals, and two ounces of some flavored syrup. The acid crystals are prevented from mixing with the filtered solution by the syrup, which latter must *not* have been clarified with white of egg. The bottle is finally filled with water in the usual manner, corked, and tied over. These lemonades are said to keep for some months without precipitation. —*Druggists' Circular.*

CHLORODYNE:

ITS HISTORY, PREPARATION, PROPERTIES, THERAPEUTIC EFFECTS, DOSES, &C.

History.—Chlorodyne was invented in the year 1848 by Dr. Browne, whilst officiating in his medical capacity during the prevalence of cholera and diarrhea amongst our troops in India, and was introduced to the notice of the faculty in this country by him as "combination of perchloric acid with a new alkaloid."

Preparation.—From Dr. Ogden's analysis it appears to be composed as follows:—Chloroform, six drams; tincture of capsicum, half a dram; oil of peppermint, three drops; muriate of morphia, eight grains; perchloric acid, twenty drops; Steele's hydrocyanic acid, twelve drops; tincture of Indian hemp, one drams; treacle, one dram. Dissolve the morphia in the perchloric acid; then add the tincture cmp., capsicum, peppermint, and chloroform, and lastly the treacle and prussic acid.

Properties.—Chlorodyne is a volatile liquid, possessing a pungent smell and taste. It is soluble in alcohol, but insoluble in water; but may be conveniently administered in that liquid by suspending it in a little mucilage. The alkalies and alkaline salts decompose it. In color it is dark brown, and in weight equal to twice its bulk of water. It is anodyne, sedative, diaphoretic, astringent, antispasmodic, diuretic, &c. Unlike the preparation of opium it does not produce headache, giddiness, prostration of strength, nor stupor; but in large doses, and from a constipated state of the bowels, it is liable to produce nausea, which in the former case may be relieved by a small dose of sal volatile, and in the latter by recourse to aperients.

Therapeutic Effects.—The changes produced by this preparation on the system are: first, a gentle heat at the stomach, followed by a general glow and total absence of pain; second, a calm and refreshing sleep; and third, an increase in the pulse, from a "small, weak, thready, hurried, or bounding one to a full, yielding, elastic, natural sort of one, decreasing in frequency of beats as well as resistance to a healthy condition."

Of its powers in the cure of consumption Dr. Stonehouse remarks:—"The cases (among others) in which I have employed it have been twelve cases of phthisis; eight of these patients have been examined by other medical men, and had been regarded as genuine cases of consumption, so that the nature of the disease does not rest upon my testimony alone. They were all well-marked cases; for I do not mention several others in an incipient stage. Two of the cases were in the last stage—*i. e.*, cavities had formed in the lungs; two others were bordering upon this stage. The remaining eight were in the second stage, that of softening; in five of these hæmoptysis was a prominent symptom. All these cases have done, or are doing, exceedingly well. Five of them have quite recovered; the others, with one exception, are in a fair way towards recovery."

Doses.—The dose of this preparation must be regulated according to the nature of the complaint. As an anodyne for febrile, inflammatory, or neuralgic affections, the dose is from ten to thirty drops; diaphoretic in cases of coughs, colds, &c., ten to twenty drops; sedative in consumption, &c., twenty to fifty drops; antispasmodic in gout, rheumatism, &c., twenty to forty drops; astringent in cholera, diarrhea, &c., fifty to one hundred drops. It is best administered on lump sugar, and given at intervals from every half hour to every four hours.—*London Chemist and Druggist.*

ELECTUARY FOR RHEUMATISM.

By J. C. C. Blackburn, M. D., of Morgan, Calhoun County, Ga.

℞.—Pulv. cinchona,	ʒ ij.
Pulv. gum guaiacum,	ʒ i.
Cream tartar,	℥ i.
Flowers sulphur,	ʒ iv.
Pulv. ginger, rad., (or African pepper, ℈ iij.)	ʒ i.
Syrup,	q. s.

Dose: one teaspoonful three times a day, or enough to keep the bowels gently open.

This has been advantageously employed in chronic rheumatism and amenorrhea.

GLYCEROLE OF LEAD.

The following is suggested as a substitute for Goulard's cerate. This cerate, as is well known, becomes speedily rancid, and in that state is more irritating than soothing to inflamed surfaces. The substitute does not change, is easily washed off with water, and can be reduced to any desired extent, for the purposes of a wash, with rose or distilled water:—

Pure glycerine,	13½ oz. (fluid).
Solution of sub-acetate of lead,	2½ oz. “
Camphor,	1 dram.

Triturate the camphor into powder, with a few drops of alcohol; add the glycerine; heat in a water-bath until the camphor is dissolved; when cool add the solution of lead, and shake well together. These proportions are those for Goulard's cerate, substituting glycerine for the oil and wax.—*Journal and Transactions of the Maryland College of Pharmacy.*

PERSULPHATE OF IRON AS A HÆMOSTATIC.

M. Monsel, of France, first proposed the use of this excellent hæmostatic, and as its use is becoming more general, we give our readers *his* process for its preparation:—

"Place in a porcelain capsule 100 grammes of distilled water, and ten grammes of sulphuric acid; raise the mixture to the boiling point, and then add fifty grammes of proto-sulphate of iron. After complete solution of the latter, pour, in small quantities, into the boiling liquid, sixteen grammes of nitric acid at 35°. When the rapid discharge of orange-colored vapors has ceased, add, in portions, fifty grammes of the proto-sulphate of iron, the solution of which will produce again reddish flames, and will cause the excess of nitric acid to disappear. The volume of the liquid is then raised to 100 grammes by the aid of distilled water, cooled, and filtered."

Monsel suggests that 100 grammes of this solution be treated with a few grammes of linseed oil, and that the mixture be shaken four times in twelve hours. There is thus obtained a perfectly neutral solution, having no nitrous odor, and susceptible of preservation for a very long time. The solution is limpid, of a very dark brownish-red, inodorous, and with an extremely astringent but non-caustic taste. It marks 45 degrees of the *pese-sels.* When concentrated by boiling it assumes the consistence of honey, and if in that condition it is spread in thin layers on plates of glass, and dried at a temperature of 100° Fah., it can be obtained in reddish-yellow scales, transparent, like those of the citrate and tartrate of iron.—*Journal de Phar. et de Chim.*, and *Boston Med. and Surg. Journal.*

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Cure for Warts or Excrescences.—The bark of the willow tree, burnt to ashes, will remove warts or excrescences.

National Medical Convention for Revising the Pharmacopœia of the United States.

The fifth Decennial Convention for the above purpose met on Wednesday, May 2, at Willard's Hall, Washington City, at 10 o'clock A. M.

Dr. George B. Wood, President of the Convention of 1850, was called to the chair, and Dr. John C. Riley, of Washington, appointed Secretary *pro tem.*

Dr. Thos. Miller, of Washington, moved that a Committee of five be appointed to nominate permanent officers of the Convention. This was carried; and Dr. Aiken, of Baltimore; Dr. E. R. Squibb, of New York; Dr. Bridges, of Philadelphia; Dr. Fuller, of Maine, and Dr. Thomas Miller, of Washington, were so appointed.

This Committee, having retired for consultation, returned and reported the following names:—

For President—Dr. George B. Wood, of Philadelphia.

For Vice-Presidents—Dr. Jacob Bigelow, of Boston; Dr. Edward Warren, of North Carolina.

For Secretary—Dr. Thomas Miller, of Washington.

For Assistant Secretary—Dr. John C. Riley, of Washington.

All of which were accordingly elected by the Convention.

On motion, a Committee on Credentials was appointed, consisting of Wm. Procter, Jr., of Philadelphia; Dr. Thomas Miller, of Washington, and Dr. Cutter, of Massachusetts.

This Committee reported the following delegates as present at the Convention, viz:—

From the College of Physicians and Surgeons of Philadelphia—Dr. Geo. B. Wood and Dr. Robert Bridges.

From the New York State Medical Society—Dr. Caleb Green and Dr. E. R. Squibb.

From the New York Academy of Medicine—Dr. E. R. Squibb.

From the College of Pharmacy of the City of New York—John Meakim and Wm. Hegeman.

From the Philadelphia College of Pharmacy—Wm. Procter, Jr., A. B. Taylor, and Edward Parrish.

From the Maine Medical Association—Dr. A. J. Fuller and Dr. H. T. Cummings.

From the Connecticut State Medical Society—Dr. Gurdon W. Russell.

From the Massachusetts Medical Society—Dr. Jacob Bigelow and Dr. Ephraim Cutter.

From the Jefferson Medical College—Dr. Franklin Bache.

From the University of Pennsylvania—Dr. Joseph Carson.

From the Medical Society of the District of Columbia—Dr. Thos. Miller and Dr. Wm. G. Young.

From the National Medical College—Dr. John C. Riley and Dr. M. S. Lincoln.

From the University of Maryland—Dr. Wm. E. A. Aiken.

From the Maryland College of Pharmacy—Alpheus P. Sharp.

From the United States Army—Dr. Lewis A. Edwards.

From the United States Navy—Dr. George Clymer.

The report of the Revising and Publishing Committee, appointed in 1850, was read, and referred to the Committee on Auditing Accounts of the Secretary and Assistant Secretary.

It was, on motion, resolved that such members of the two houses of Congress as are medical graduates be invited to attend the Convention and participate in its deliberations.

The delegates of several medical bodies represented in the Convention were then called on for contributions towards a revision of the National Pharmacopœia, when reports were handed in from the Massachusetts Medical Society, by Drs. Cutter and Bigelow; from the New York State Medical Society, by Dr. Squibb; from the New York Academy of Medicine, by the same; from the New York College of Pharmacy, by Wm. Hegeman, and from the Philadelphia College of Pharmacy, by Wm. Procter, Jr.

Dr. Parrish presented a report from the American Pharmaceutical Society, a body not incorporated and not represented in this Society; which was received.

These reports were referred to a Committee, with directions to report a plan for the revision and publication of the Pharmacopœia; the committee to consist of Dr. Franklin Bache, Dr. Edward Parrish, Alpheus P. Sharp, Dr. Thomas Miller, and George W. Russell of Connecticut.

The Convention then adjourned to Thursday, at 11 o'clock.

SECOND DAY.

At 11 o'clock, the chair was taken by Dr. Geo. B. Wood, of Philadelphia, the President of the Convention.

The minutes of the meeting of the preceding day were read by Dr. Thos. Miller, the Secretary.

Mr. Procter, from the Committee on Credentials, reported the presence to-day of the following gentlemen, additional to those present yesterday:—

From the Delaware State Medical Society—Dr. F. H. Askew.

From the Maryland College of Pharmacy—Mr. George W. Andrews.

From the Massachusetts College of Pharmacy—Messrs. Charles T. Carney and Robert R. Kent.

From the New York College of Pharmacy—Alex. Cushman.

Dr. Miller, from the Auditing Committee, stated that the report of the Revising and Publishing Committee appointed in 1850 had been examined, and found correct.

Dr. Bache, from the Committee on a Plan for the Revision of the Pharmacopœia, brought in a report, comprising a series of resolutions, one of which was that there should be a Committee of nine (Dr. Wood to be one) to revise and publish the Pharmacopœia; also, that three be a quorum, and that the place of meeting be in Philadelphia.

On motion of Dr. Miller, the report was considered, resolution by resolution; and it was ultimately passed.

Mr. Meakim, of New York, moved that a Committee be chosen from each of the delegations present; to nominate eight members of the Committee on Revision and Publication of the Pharmacopœia.

Dr. Miller moved to amend this, by making it a member from each State and Territory represented, viz: ten in all.

Dr. Bache thought it best that the choice should be made so that several of the Committee should be residents in or near Philadelphia, where the meetings of the Committee are to be held.

Dr. Askew moved that the President directly appoint the Revising and Publishing Committee.

Dr. Bache, with all confidence in the President, thought it would be best that the Committee be appointed by the States and Territories represented.

The President preferred to have nothing to do with this appointment, but that it be left altogether to the Convention.

The motion of Dr. Askew was put, and negatived; when

The motion of Dr. Miller recurring, it was put and carried unanimously.

On motion of Dr. Bache, a recess of ten minutes, to confer with the President on the subject of appointing the Nominating Committee, was had; after which the meeting was resumed, and the Chair gave the names of the Committee.

Dr. Carson moved a resolution of thanks to the Messrs. Willard, for putting their hall at the service of the Convention during its sitting. Passed unanimously.

On motion of Dr. Bache, a Committee of five, to be appointed by the Chair, should be charged with the duty of reporting on a plan for organizing the next Convention of 1870.

The Committee thus constituted consisted of Drs. Bache, Squibb, Miller, Andrews, and Carson.

A recess of fifteen minutes was taken, to allow the two Committees to consult and report.

On coming again to order, Dr. Askew read the report of the Nominating Committee, which proposed for the Committee on Revision and Publication of the Pharmacopœia the following gentlemen:—

Dr. Franklin Bache, of Philadelphia; Dr. E. R. Squibb, of New York; Mr. C. T. Carney, of Massachusetts; Dr. Geo. B. Wood, of Philadelphia; Dr. H. T. Cumming, of Maine; Mr. Wm. Procter, of Philadelphia; Mr. Ira Carson, of Philadelphia; Mr. Wm. S. Thompson, of Baltimore, and Mr. Ira B. Taylor, of Philadelphia.

The report was accepted, and its nominations confirmed.

The Committee to make arrangements for the Convention of 1870 reported, through its chairman, Dr. Bache, that the same rules as adopted in 1850 for the present Convention be taken, by simply changing dates.

This report was adopted.

Mr. Wm. Hegeman, of New York, moved to ask an expression of the opinion of the Convention in reference to the subject of a bill now before Congress to provide for the greater security of the medical profession, and the public, in the matter of importation of drugs and medicines.

The President thought that though the subject mentioned by the gentleman was one of high interest and importance to the general profession, yet it would be better for the Convention to confine its deliberations to the specific matter which had called them together.

Dr. Parrish thought that great praise was due to the New York College of Pharmacy for their action in reference to establishing standards for the strength and purity of drugs and medicines, but at the same time he deemed it not within the scope of the objects of the present Convention to interfere with the matter.

Mr. Carney, of Boston, thought the cause of pure drugs and medicines before Congress might be advanced by a simple expression of opinion by this body.

The President said that there would soon meet two bodies, the American Medical Association and the Pharmaceutical Association, for the consideration of whom the measure proposed would be altogether appropriate.

On motion of Dr. Carson, several sections of the bill before Congress were read.

Dr. Bache, whilst acknowledging the great importance of the matter, deemed it not germane to the objects of this Convention, and therefore moved to lay the subject on the table; which was accordingly done.

Mr. Meakim called the attention of the Convention to a proposition of the New York College of Pharmacy, which he embodied in a resolution, and moved—

That in the index of the Pharmacopœia, the syllables of both Latin and English names be so divided and accented that the index may also serve as a pronouncing vocabulary to the Materia Medica.

This subject was learnedly debated by Dr. Bache, Dr. Askew, and others; when

Dr. Askew moved to refer the subject to the Committee on Revision and Publication, to be acted on or not, according to its discretion.

On being put, this motion was lost by 9 ayes to 12 nays.

The resolution of Mr. Meakim was then put, and a new debate arose; when the resolution was carried by 12 ayes to 10 nays.

Mr. Meakim next called the notice of the Convention to its title of the "National Medical Convention," &c., &c., and moved to change to "The Pharmacopœia Convention."

Dr. Bache proposed merely to strike from the present name the word "Medical;" which was put to the vote, and carried unanimously.

So the Convention will be called "The National Convention for Revising," &c., &c.

On motion of Mr. PROCTER, a contribution was then made by each of the members present to defray the expenses of the Convention.

The PRESIDENT took the opportunity to explain that the vote on the resolution of Mr. Meakim was merely a recommendation to the Committee on Revision and Publication, and not an instruction.

Mr. PROCTER spoke in favor of having a low-priced edition of the Pharmacopœia for more general distribution among pharmaceutists, which would do much to insure uniformity of preparation of medicines, &c.

The subject was discussed by the President, Dr. Bache, and Mr. Procter, when the matter seemed to be remitted to the discretion of the Committee on Revision, who were stated by the President to be always anxious to furnish an edition at the lowest price at which it could be done.

Dr. PARRISH introduced the subject of uniformity of weights and measures by the medical profession and by the apothecaries of the country. He advocated making the avoirdupois ounce the standard weight, as was advocated in England.

The PRESIDENT thought the Convention could not discuss this subject with profit in the short time allotted to it.

Mr. MEAKIM thought it best to begin now, if anything was to be done in the future.

Dr. BACHE called up Mr. Taylor, of Philadelphia, who had written with much learning and effect on this subject.

Mr. TAYLOR then addressed the Convention in advocacy of abolishing the troy and avoirdupois scales now in use, and substitute the grain as the unit for all weights less than a pound avoirdupois—beyond that he would use pounds. He would also do away with the Roman symbols, and use the common Arabic figures. He thought this better than the plan now proposed in Great Britain.

Dr. SQUIBB read an extract from the united proceedings of the New York Academy of Medicine and the New York College of Pharmacy on this subject.

Dr. PARRISH advocated the abolition of the present anomalous weights, and was in favor of the avoirdupois ounce and pound.

Mr. PROCTER also favored the avoirdupois measure as the only one to be used.

Dr. BACHE thought it better, for the sake of uniformity, to wait the action of the British Commissioners on the subject of the consolidation of the London, Edinburgh, and Dublin Pharmacopœias into a British Pharmacopœia. He was himself against changing the troy grain, and hoped the British Commissioners would not. He preferred the French system of *grammes* and *centigrammes*, doing away with *decigrammes;* but as there was little hope of this system being adopted in Great Britain, it would be best to wait and see what was done there before we act.

Mr. Meakim advocated the "grain" standard.

Dr. Parrish preferred the ounce.

Mr. Procter said that even in France now, in many of their best works on pharmacy, they reject the decimal division, and go back to the old ante-revolutionary measures.

The subject of weights and measures was then dropped.

After a vote of thanks to the President, the Secretary, and Assistant Secretaries, the Convention adjourned *sine die*.

Editorial.

National Medical Convention for Revising the Pharmacopœia of the United States.—We publish this month the proceedings of this important Convention, which convened on the 2d of this month at Washington, D. C., and are indebted to the *National Intelligencer* of that city for a report of its proceedings.

The labor of revision has been committed to a Committee, to whom are referred the contributions and reports of the several Societies, as well as all papers having reference thereto. This Committee will publish the work as soon as their labors are concluded, awaiting its final completion for the publication of the British Pharmacopœia, which is soon expected to appear.

It is the intention of the Publication Committee, we believe, to publish an edition at a low cost, to enable all who ought to possess this work to do so, as many go without it rather than pay a high price.

The Committee of the Philadelphia College of Pharmacy have recommended the following changes, among others:—

New Preparations.

Acetum Lobeliæ,
  " Sanguinariæ,
Acidum Chromicum,
  " Phosphoricum Dil.,
  " Valerianicum,
Æther Fortior,
Spiritus Chloroformi,
Aluminæ Sulphas,
Ammoniæ Phosphas,
  " Valerianas,
Aqua Creasoti,
  " Aurantii Flores,
Atropia,
Atropiæ Sulphas,
Bismuthi Carbonas,
Cadmii Sulphas,
Calcis Phosphas Præcipitatus,
Ceratrum Extracti Cantharidis,
Cinchoniæ Sulphas,
Emplastrum Arnicæ,
  " Conii,
Emplastrum Picis Canadensis,
  " Plumbi Fuscum,
Extractum Arnicæ,
  " Digitalis,
  " Colocynthidis,
  " Senegæ,
  " Valerianæ,
  " Ignatiæ,
  " Aconiti Radicis Fluidum,
  " Buchu Fluidum,
  " Cimicifugæ Fluidum,
  " Cinchonæ Fluidum,
  " Conii Fluidum,
  " Colchici Fluidum,
  " Dulcamaræ,
  " Ergotæ Fluidum,
  " Gentianæ Fluidum,
  " Geranii Fluidum,
  " Glycyrrhizæ Fluidum,
  " Hyoscyami Fluidum,
  " Ipecacuanhæ Fluidum,

Extractum Krameriæ Fluidum,
" Lobeliæ Fluidum,
" Pruni Virg. Fluidum,
" Podophylli Fluidum,
" Scillæ Fluidum,
" Serpentariæ Fluidum,
" Spigeliæ Fluidum,
" Taraxaci Fluidum,
" Uva Ursi Fluidum,
" Veratri Vir. Fluidum,
" Zingiberis Fluidum,
Liquor Chlorinii,
" Ferri Tersulphatis,
" Ferri Citratis,
Ferri et Aluminæ Sulphas,
" Ammoniæ Citras,
" Ammoniæ Tartras,
" Quiniæ Citras,
" Strychniæ Citras,
Ferri Sulphas Exsiccat,
" Valerianas,
Oleum Tanaceti,
" Erigeronis,
Pulvis Rhei Compositus,
" Sodæ Effervescentes,
" Aperientes Effervescentes,
Quiniæ Valerianis,
Resina Jalapæ,
" Podophylli,
" Scammonii,
Santoninum,
Liquor Sodæ,
Sodæ Chloras,
" Valerianas,
Spiritus Cinnamoni,
" Limonis,
Strychniæ Sulphas,
Syrupus Rosæ Gallicæ,
" Rubi Radicis,
Tinctura Arnicæ,
" Cannabis,
Tinct. Capsici et Myrrhæ,
" Cinchonæ Ferratæ,
" Ignatiæ,
" Opii Deodorata,
" Rhei Aromatica,
" Veratri Viridis,
Trochisci Cubebæ,
" Ferri Carbonatis,
" Zingiberis,
Unguentum Adipis,
Zinci Valerianas.

Preparations Expunged.

Ferri Iodidum,
Pil. Ferri Iodidi,
" Ferri Compos.,
" Galbani Comp.,
Spongiæ Ustæ,
Tinct. Cinnam. Comp.,
" Rhei et Gentianæ.

HYDRASTIN IN CATARRHAL OPTHALMIA.—Dr. R. R. Stevenson, of Reedsville, Ind., communicates to us the following:—

"I have been using an ointment made of your 'hydrastin,' and mutton suet, in a great many cases of catarrhal opthalmia, with great success—a disease that has been very prevalent in this State and Illinois for a great many years, caused, according to my view, by a humid atmosphere and heavy northwest winds in the autumn and spring. The following is my formula for preparing it:—

"℞.—Adeps ovillus, ... ℥ss.
Hydrastina (alkaloid), ... gr. ij.
Venice turpentine, ... gtt. iv.

M. ft. ung. Apply to the eyelids night and morning.

"I have also succeeded in curing a great many cases of chronic inflammation of the conjunctive with the above preparation. I have used the golden seal, with very happy effects, in gonorrhea, gleet, and other diseases of the urinary organs, depending on an increased action of the mucus membranes."

LADIES' SLIPPER.—Dr. Simms, of Wilmington, Del., says:—"I have used fluid extract of ladies' slipper in several cases of mania-a-potu, with entire success. I prescribed one tablespoonful every hour until sleep was produced, which was in twelve hours, continuing it in smaller doses until the patient was well. There was no stupor on waking, but an entire tranquillity of the nervous system, and hardly any weakness."

PROF. GRAHAME, of the Maryland College of Pharmacy, has resigned the chair of Pharmacy, and retires from pharmaceutical pursuits to devote his attention to another profession.

DR. EDWARD WARREN, of Edenton, N. C., editor of the North Carolina *Journal of Medicine*, has been appointed to the chair of Materia Medica and Therapeutics in the University of Maryland, at Baltimore.

THE CHEMIST AND DRUGGIST, OF LONDON.—We are happy to add to our exchange list this new and well-conducted journal. It was established as a means of direct communication with the chemists and druggists, and has, we understand, met with signal success. We shall give it a full notice at another time.

THE PENINSULAR AND INDEPENDENT MEDICAL JOURNAL.—This periodical has, for the last two years, been published in Detroit, Mich., as a union of two medical journals which were previously published separately in that city. It is hereafter to be discontinued—the valedictory of its senior editor, Prof. A. B. Palmer, appearing in the last number. The cause given by the publishers for the discontinuance of the work is, that "the outlay the past year has been so much larger than the receipts."—*Boston Med. and Surg. Journal.*

PROF AUSTIN FLINT, JR., has recently been appointed to the chair of Physiology and Microsopic Anatomy in the New Orleans School of Medicine. The former incumbent of this, Prof. Peniston, has been tranferred to the chair of Anatomy, Prof. Beard resigning it and assuming the duties of the chair of the Principles of Surgery and Surgical Pathology, while Prof. Choppin takes a new professorship, to be called the chair of Clinical and Operative Surgery. Dr. Flint, previous to accepting this position, had resigned his professorship in the New York Medical College.—*Am. Med. Monthly.*

UNIVERSITY OF LOUISVILLE, KY.—The commencement exercises at the close of the twenty-third session of the Medical Department of the Univerity took place recently, and the degree of M. D. was conferred on forty-one of the recent class· A brief address was given by Hon. James Guthrie, President of the Board of Trustees, and the valedictory delivered by Prof. J. Lawrence Smith.—*Boston Medical and Surgical Journal.*

THE Collegiate Department of the Long Island College Hospital opened on the 29th ult., with an introductory by Prof. Hamilton.

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THE

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Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER VI.

ARISTOLOCHIA SERPENTARIA.

Snake-Root—Virginia Snake-Root—Snake-Weed.

THE *Virginia snake-root* belongs to the *apetalous exogenous plants*, which have no corolla, the floral envelopes in a single calyx, or wanting altogether. *Natural order*, Aristolochiaceæ, (birthwort family); *Linnean system*, Gynandria—Hexandria. Its Greek name has reference to the supposed medical virtues of the plant. The birthwort family in the United States includes only two genera, the asarum and the aristolochia, each including three species, and all possessed of similar medicinal properties. The genus Aristolochia is composed of herbaceous or shrubby species, with twining or erect stems, and usually cordate or entire leaves; sometimes three-lobed; with radical or axillary flowers. There are numerous species of the plant, most of which are natives of the tropical portions of South America, and are shrubby, for the most part; others are found in India, on the borders of the Mediterranean, and in North America. These plants are all regarded as antidotes in cases of bites of poisonous snakes in every country where they abound; and it is very probable, from their highly stimulating properties, they may possess such virtues in some degree. It is well known, however, that they are not reliable in very severe cases. The active principle resides in the root. The *A. serpentaria* generally grows to the height of eight or ten inches, and has a perennial root, composed of numerous slender fibres, arising from a knotty, brown head, sending up a number of stems, simple or slightly-branched, jointed, flexuous, and often of a reddish tinge. The *leaves* are alternate, on short petioles, oblong, entire, acuminate, heart-shaped at base, three-nerved. The *flowers* are nearly radical, like those of the asarum, having a stiff, leathery texture, and a dull brownish, lurid, purple color. The *anthers* are six, and sessile, oblong, obtuse—*pod* naked; *seeds* flat. This plant is found throughout the United States, from New England to Mexico and California, in rich, shady woods, especially on hill-sides. It is most abundant in the Middle and Western States, but is not so common in alluvial and calcarious soils. It flowers in June, and matures its fruit in July and August. Its blossoms rarely appear before the third year, but as they are few, and often concealed under dead leaves, some have supposed that the inflorescence is not developed annually. This, however, is a mistake.

Physical Properties and Chemical Composition.—The root, the officinal portion, is made up of tufts of slender, long, matted fibres, attached to a knotty head; they are brittle, and of a yellowish-brown color, possessing an agreeable aromatic odor, and a pungent, aromatic, bitter taste, not easily concealed by any admixture. The powder is grayish, and its properties are all imparted to proof spirit, partially only to water, with which it forms a yellowish-brown infusion, while, with alcohol, it affords a greenish tincture. Serpentaria has been analyzed by several chemists; first by Chevallier, who found in the root volatile oil, a yellow bitter principle soluble in water and alcohol, resin, gum, starch, albumen, lignin, and various salts. Buckholz obtained from 1,000 parts, 5 of a green fragrant volatile oil, 28.5 of a yellowish-green resin, 17 of extractive matter, 181 of gummy extract, 624 of lignin, and 144.5 of water. The volatile oil passes over with water in distillation, rendering the liquid milky, and impregnating it with the peculiar odor of the root. Dr. Bigelow states that small crystals of camphor are deposited around the edges of the surface of the liquid, on standing.

Recent analysis by the Tildens yields the following results:—

Organic Matters,	85.833
Inorganic Matters,	14.167
Total,	100.000

Albumen,	0.674
Gum,	1.917
Starch,	1.657
Sugar,	2.057
Extractive,	3.241
Coloring Matter,	3.174
Bitter Principle,	2.916
Oil,	3.833
Resin,	2.036
Malate of Lime,	1.874
Nitrate of Potash,	0.934
Soluble Salts,	1.338
Insoluble Salts,	12.685
Lignin,	61.664
Total,	100.000

The medicinal virtues are dependent chiefly on the volatile oil and bitter principle, though the extractive and resin are by no means inert. The bitter principle is probably an alkaloid, though not yet isolated. The root contains but small quantities of albumen, gum and starch, while the oil and resin preponderate over the other medicinal constituents. The small amount of soluble salts, and the very large proportion of the insoluble is also worthy of note. The caudex contains a much larger amount of starch than the fibrous portion.

Other Species and Varieties of Serpentaria.—According to Gray, there are but two other species of the snake-root in the Northern, Middle and Western States, viz: the *A. sipho* (*pipe-vine—Dutchman's pipe*), and the *A. tomentosa.* The first has round, kidney-shaped leaves, slightly downy underneath; peduncles with a clasping bract; glabrous, and abounds in rich woods, from Pennsylvania, southward, along the mountains; climbing trees.

The *A. tomentosa* has round, heart-shaped leaves, very veiny, with a greenish-yellow calyx. This, also, is a climbing plant, ascending to the summit of the highest trees, and has a thick, creeping root, entirely different in shape from that of the officinal species. Both of the above species have the same medicinal properties as the *A. serpentaria.*

Besides the above, there are three other species, or, perhaps, varieties, found in some parts of the United States, viz: the *A. hirsuta*, *A. hastata*, and *A. reticulata.* The *A. hirsuta* was first described by Muhlenberg. It has a root consisting of a knotty caudex, sending out numerous simple, slender fibres, sometimes several inches in length, resembling the root of the *A. serpentaria.* There are several jointed, flexuous, pubescent stems, less than a foot high; the leaves are large, roundish, cordate—the lower ones obtuse, the upper abruptly accuminate, and all pubescent. On both sides and at the margin the flowers are solitary, on peduncles originating from the points near the root. This species is not uncommon in the Western States and Virginia, and its roots are often substituted for those of the officinal species. The *A. hastata*, of Nuttall, is, doubtless, a mere variety, and differs from the *A. serpentaria* in having acute, hastate, somewhat cordate leaves, and the lip of the corolla ovate. Its root closely resembles that of the officinal plant, and is frequently mixed with it, as found in the market. It abounds in the more Southern States and west of the Mississippi. The *A. reticulata*, of Nuttall, is now substituted to a great extent for the Virginia snake-root, from which the root differs chiefly in the size of the radicles, which are thicker and less interlaced, each root having usually a considerable portion of one or more stems attached to the caudex. The root, which is yellowish, can scarcely be distinguished in smell and taste from that of the common serpentaria, and it is found to be equally efficient as a remedy. Chemical analysis shows it to contain the same constituents, but a larger per centage of volatile oil, gum, and bitter extractive. (*Bridges; Am. Jour. of Pharm.* 16, p. 16.) This species grows abundantly in Louisiana, Arkansas, and west of the Mississippi, and is collected to a considerable extent by the Indians. All the above species, or varieties, are endowed with the same properties as the officinal species, and may be substituted for it.

Physiological and Medicinal Properties and Uses.—This is one of the most important and valuable of our indigenous remedies.

Introduced to the notice of the profession as early as 1633, by Johnson, in "Gerard's Herbal," it has maintained its reputation to the present time, and is now generally regarded as scarcely inferior to any other article as a warm, stimulating, diaphoretic tonic. Introduced at first as an antidote to the bite of serpents, in common with all its other species in other parts of the world, it was surmised that it would prove of equal value in low and malignant fevers, in which the blood was supposed to be poisoned, and being found efficacious in such cases it was applied to the treatment of other fevers and other forms of disease, as intermittents, remittents, gangrene, typhoid pneumonia, dyspepsia, chlorosis, &c. Experience soon proved that it had great power in sustaining the circulation, when weak and languid—promoting, especially, the capillary circulation, while it caused diaphoresis; acceptable to the stomach in moderate doses, but, in large, producing nausea, vomiting and purging, and exerting no special influence on the brain or cerebro-spinal system.

Jörg found, in his experiments, that when taken in doses of two to five scruples of the root, in four to eight ounces of water, and also in powder, in doses of from fifteen grains to one scruple, it excited the intestinal canal, producing a determination of blood to all the abdominal viscera, and occasioning flatulence rather than an increased mucous secretion. The phenomena usually following its administration were eructations, nausea, vomiting, pains, and a sense of weight in the stomach, borborygmy, colicky pains, frequent expulsion of wind, tenesmus, consistent stools, sometimes increased, and at others diminished appetite, tumefaction of the abdomen, especially at the epigastrium, and itching of the anus. In other instances it produced a sense of heat, weight, and pain in the head, indicating a degree of congestion of the brain. It was found also sometimes to produce excitement of the circulation, and in other cases an increased secretion of urine. The infusion seemed to effect the brain most, while the powder acted more efficiently on the intestinal canal. The effects of serpentaria, when administered in small doses, continue during eight or twelve hours; in larger doses during eighteen to twenty-four hours. On this account, Jörg concludes that it should not be repeated more than twice in twenty-four hours; while a single dose a day is sometimes sufficient. The medium dose for an adult, he says, is one dram of the root, either in powder or infusion. From the result of his experiments with this remedy, Jörg concludes that the serpentaria can be useful only in cases attended with a torpid condition of the intestinal canal, as it tends to arrest the mucous and other secretions from the mucous membrane of the bowels; it is principally useful in chronic diarrhea, unconnected with inflammation. In colliquative diarrhea, also, not attended with phlegmasiæ, it will prove beneficial. On the contrary, he thinks it should not be exhibited in those cases in which the intestinal torpor is connected with congestion, or phlogosis, however slight, of the abdominal viscera, nor when congestion of the brain is to be apprehended. It is improper also during a flatulent condition of the intestines. These inferences were all derived from the effects of serpentaria, when administered to persons in health. Let us see how far they are borne out by actual experience at the bed-side.

It is generally conceded that the serpentaria is endowed with stimulating, tonic and diaphoretic properties, in a very high degree—combining the virtues of the simple bitters and the aromatic class of stimulants. Thus, in appropriate conditions, it improves the appetite, invigorates the digestive function, promotes animal heat, increases the force of the pulse, and in some conditions, as hectic fever and extreme prostration and debility, rendering it slower, by the increased tonicity imparted to the heart; while, in other states, it increases its frequency. Diaphoresis is very commonly the result after its administration, especially when given warm; if taken cold, the patient not being confined to bed, it usually operates upon the kidneys, causing diuresis. As a general rule, it promotes the secretions generally, especially the bronchial, gastric, and cutaneous. We have never known it to cause pain, nausea, vomiting, or purging, except when taken in overdoses. In such instances, some or all of these effects are certain to follow, and probably disturbed sleep, with pain or a sense of weight in the head.

The serpentaria was generally employed during the last century, and before the discovery and isolation of quinine, as a prophylactic and remedy for intermittents. Sydenham, in 1679, says:—To cure tertians in poor people, who are not able to bear the charge of a long process, take of Virginia snake-weed, finely powdered, one scruple; of white wine, three ounces. Mingle them; let the sick take it two hours before the fit, and being well covered with clothes, let him sweat three or four hours, and let it be repeated twice when the fit approaches." (*Translated by Pechey*, p. 233.) In other places he advises to add it to Peruvian bark, or as a substitute for that medicine in intermittents. The celebrated Mead & Huxham also employed it extensively, not only in this class of diseases, but in all low forms of disease, and sinking states of the system, where the more stimulating tonics are indicated. In the retrocedent gout, where it fastened upon the stomach or any of the internal vital organs, these and other writers of that period recommended a warm infusion of the snake-weed to be freely given, as a very certain and successful remedy. Its reputation continued unabated almost during the sixteenth and seventeenth centuries; but it fell into comparative disuse during the eighteenth, and was again revived about the commencement of the present century, and is now a favorite and popular remedy. Cullen remarks that "the serpentaria, by its powerful acrimony, proves a powerful stimulant to the system, and therefore may be useful in some cases of continued fevers. But as the cure of either intermittent or continued fevers by stimulants alone is an ambiguous and dangerous practice, so in the former it is only safe when joined with the bark; and the use of it in continued fevers is to be employed with much caution. The common notion of its alexipharmic powers, both with respect to it and all the others, which have gone under the same title, is an incorrect and false notion, liable to much abuse, and which I, myself, have had occasion to observe. The stimulant power of the serpentaria is especially suited to the low and advanced state of the typhus only, and even then it will be more safely joined with the bark than employed for its stimulant power alone. It is certainly owing to this ambiguity in its use that it is not nearly so much employed in practice as it was some forty years ago." (*Mat. Med.*, vol. 2, p. 86.) Such was the estimation in which this remedy was held about a century ago; since then its powers have been more fully investigated, and more accurately ascertained. Its antiperiodic virtues are now known to be feeble, and its former success in paroxysmal affections was doubtless chiefly owing to the cinchona combined with it. The combined properties of these two remedies are well illustrated in the celebrated "*Huxham's tincture of bark,*" as well as the "*compound tincture of Peruvian bark*" of the British and American Pharmacopœias. This association of serpentaria with cinchona answers an admirable purpose in many cases, especially where in intermittent or remittent fever there is great debility associated with considerable torpor of the stomach; and it is no less beneficial in low, sinking or malignant cases of typhus or typhoid fever, combined with camphor or carbonate of ammonia. In typhoid pneumonia, sphacelus and gangrene, or common pneumonia in intemperate subjects, or persons of broken constitutions, the same combination will be found particularly efficacious. As a diaphoretic when the skin is hot and dry, and the relaxing, depressing sudorifics are contra-indicated, the serpentaria answers an excellent purpose, supporting the vital powers, and stimulating the vital properties in a very marked degree. For this purpose the fluid hydro-alcoholic extract or tincture should be selected instead of the infusion, which contains comparatively a small amount of volatile oil and resin. From extended experience with this remedy we have come to place great reliance on it, as a supporting agent, in most forms of disease where the nervous and vital energies are greatly depressed, as in typhoid states of the system generally; in the latter stages of most febrile diseases, as continued or malarious fevers of every grade and type; in typhoid pneumonia; in exanthematous affections where the eruption has receded, or is tardy in making its appearance; in malignant scarlatina and diphtheria, in combination with camphor or ammonia; in atonic dyspepsia, in form of fluid extract, combined with fluid extract of rhubarb, and bicarbonate of potash; in gangrene and spacelus, with some alcoholic stimulant; and as a gargle in malignant sore-throat. When wisely adapted to the pathological conditions of the system, and the nature of the disease, it will prove an admirable supporting remedy, entirely exempt from the objections brought against it by Jörg, and founded on results obtained from its trials on the healthy subject. An infusion of serpentaria has been found useful in allaying vomiting. In the Southern States it is extensively employed as a popular remedy by the negroes in the low stages of pneumonia, to which they are particularly liable, though its efficacy is greatly increased by the addition of camphor. Rafinesque says that the "serpentaria is diaphoretic, tonic, anodyne, antispasmodic, cordial, antiseptic, vermifuge, exanthematic, alexiteric, and a powerful stimulant of the whole system. It is useful in the low stages of fevers, to support strength and allay irregular actions; too stimulant in inflammatory fevers and disorders, but an excellent auxiliary to Peruvian bark and other tonics in intermittents, enabling the stomach to bear them, and increasing their effects. In remittent fevers it is preferable to bark. It is deservedly a popular country remedy, in infusion, for pleurisy, exanthems, cachexia, catarrh, rheumatism, &c., acting as a sudorific. In bilious pleurisy it has been found highly serviceable; in bilious complaints it checks vomiting, and tranquilizes the stomach. In typhus and typhoid pneumonia it has been of beneficial effects, promoting perspiration, checking mortification, and abating the symptoms. It is probably a good substitute for camphor and valerian in many cases. The doses of the powder are from ten to thirty grains, often repeated, or an ounce of the warm infusion every three hours. Wine is an excellent vehicle for it in fevers. Many compound tinctures contain it." (*Med. Flora*, vol. 1, p. 64.)

In the early part of our practice we were much in the habit of giving snake-root and cinchona in combination, especially in the treatment of intermittents, and with highly satisfactory results. The late Prof. Chapman was very partial to its use in such cases. "In some patients," he remarks, "such is the irritability of the stomach, that bark, in substance, cannot be retained even in the smallest dose. In such cases we resort to it, either in decoction, prepared by itself, or in union with some aromatic, as cloves, cinnamon, orange peel, or Virginia snake-root. The last of these articles, I think, is to be preferred, since it renders the mixture quite as pleasant to the taste, is as comfortable to the stomach, and perhaps more efficacious. Combinations, too, of this sort will cure intermittents, when the bark alone fails, and are particularly adapted to children, and other delicate persons." (*Elem. of Ther.*, vol. 2, p. 411.) A favorite formula with Dr. Chapman, in cases of intermittents, was: half an ounce of cinchona bark, one dram of serpentaria, and twenty grains of carbonate of potash, divided into four powders, one to be given every three hours during the intermission. "This," he remarks, "has long had an established reputation in the practice of this city (Philadelphia), and I have known it very promptly to arrest some of the most intractable cases." (*Ibid*, p. 411.) Dr. C. also thought that serpentaria was preferable to bark in the case of remittent fever, inasmuch as it is rarely offensive to the stomach, and may be given in those obscure states of the disease where the remission is not discernible. This article was extensively employed, and is yet, in many parts of the United States, as a popular remedy in the secondary stages of pleurisy. After bleeding, it was a very general practice to resort to a strong infusion of this article, with a view of exciting perspiration, and with very favorable results. Catarrhs, rheumatisms, and other febrile affections were managed in the same way. This practice is still common in the Middle, Southern and Western States. Dr. C. speaks in the highest terms of serpentaria in bilious pleurisy, and says he always found it useful in such cases, and that there is no modification of disease in which it displays its power more advantageously. After moderate depletion and a thorough evacuation of the alimentary canal, a warm infusion is to be freely given, in order to excite copious diaphoresis. From its power of tranquilizing the stomach and checking vomiting, it is well adapted to bilious cases, especially when attended with prostration and a cool surface. The late Prof. Eberle considered the snake-root to be peculiarly suited to fevers of a low grade of excitement, and to every variety of fever, when the system is sinking into a typhoid state. He also thought it especially applicable in the latter stages of febrile diseases, when the skin and tongue remain dry and hot, and the pulse is feeble and frequent. Nothing is more common than to find in such cases the tongue becoming moist and clean, and the skin assuming a natural temperature, while the pulse and general powers of the system are invigorated under its use. We have often seen the most strikingly beneficial effects from its use in typhoid pneumonia, proving at the same time stimulant, diaphoretic and tonic, equalizing the circulation, and imparting vigor to the vital forces. It is an excellent plan to combine it with senega in the treatment of this disease, as well as the latter stages of common pneumonia and bronchial affections, attended with much prostration. It must be borne in mind, however, that serpentaria is not a powerful stimulant or tonic, and that where there is very great debility or prostration more powerful agents will be necessary, alone or in conjunction with it, as wine, brandy, quinine, ammonia, camphor, &c. This is one of the first medicines to which we may resort, as Prof. Wood has remarked, whenever any febrile disease begins to exhibit a low or typhoid character, provided the stomach be wholly free from inflammation or vascular irritation. When typhus or typhoid fever, for example, is passing from the first stage of excitement into that of debility, or protracted remittent fever is assuming a low character, in typhoid pneumonia, and in small-pox, scarlatina, malignant sore-throat and erysipelas, under similar circumstances: in all such cases the snake-root will prove a reliable and valuable remedy. No one, however, can suppose that it possesses any special, specific, curative powers. In very serious cases of disease it is rather to be employed as an adjuvant than the sole or principal remedy; as a gargle in malignant sore-throat, with sumach berries, it has proved of great utility. As an alexipharmic, or remedy for snake poison and canine virus, it is now very justly exploded.

Its chief value is as a tonic diaphoretic. As an emmenagogue serpentaria has long enjoyed considerable reputation. In this respect it may be ranked with the senega; the warm infusion given at bed-time, after the use of the hot pediluvium, or hip-bath, will often restore the menstrual flow. On the whole, I would say, with Christison, that "though its virtues generally have been exaggerated by some, it deserves more attention than it has yet received as a tonic diaphoretic." The cold infusion acts simply as a mild and efficient tonic.

Preparations and Doses: Fluid extract, powder, infusion, tincture, compound tincture, syrup.—The *fluid extract*, prepared in vacuo by hydro-alcohol, deserves the first rank in the list of preparations, inasmuch as it contains all the active organic constituents in a concentrated form. An ordinary dose of the Tildens' manufacture is from one-fourth to one-half dram, repeated according to circumstances. It may be flavored with any of the aromatic volatile oils or essences, as wintergreen, sassafras, spearmint, peppermint, anise, fennel, or checkerberry, although it is difficult to entirely conceal the taste of the serpentaria. The fluid extract of this root has not long been introduced into practice, and the generality of physicians are wholly unacquainted with it. It is, however, destined to supersede most of the other preparations, as its excellencies become better known.*

Tincture.—The tincture of serpentaria, as prepared by the Tildens, is made with three ounces of the fluid extract to one pint of diluted alcohol, of which a dose is from one to two drams. According to the London, Edinburgh and Dublin Dispensatories, the tincture is prepared by taking three ounces and a half of the cut and bruised snake-root, and macerate for fourteen days, (seven days, Dublin,) in two pints of proof spirit, and filter. The Edinburgh Dispensatory adds one dram of bruised cochineal. This tincture is pronounced to be stimulant and diaphoretic, and a useful addition to infusion of cinchona bark in typhoid and putrid fevers, gout, and periodic headache. The dose is from f. ʒ ss. to ʒ ij. The U. S. P. directs three ounces of the snake-root to two pints of diluted alcohol; macerate fourteen days, express, and filter through paper, or by moistening the root, in powder, with diluted alcohol, allowing it to stand for twenty-four hours; then transferring it to a percolator, and gradually pouring upon it diluted alcohol, until two pints of filtered liquor are obtained. This is, for the most part, a reliable preparation, but in some cases objectionable, from the quantity of spirit it contains.

The *powder* is given in doses of from ten to thirty grains, but is objectionable from the large amount of woody fibre and other inert matters contained in it, which only tend to disorder the stomach, and add nothing to its efficacy.

Infusion.—The infusion, according to the U. S. P., is made with half an ounce of the snake-root to one pint of boiling water; macerate for one hour in a covered vessel, and strain. The dose would be one fluid ounce. The foreign Pharmacopœias use the same proportions, directing to macerate four hours, and taking from half an ounce to two ounces as a dose. As the active principles of serpentaria are chiefly volatile oil, in combination with resin, it is obvious that an infusion of the root will take up but a small portion of the active organic constituents. If the bitter principle is an alkaloid, as there is good reason to suspect, then a cold infusion would prove simply tonic, and probably answer all the indications of the simple bitters. But as a diaphoretic tonic, the tincture or fluid extract, given in warm tea, would be preferable. In making the infusion, the Tildens direct half an ounce of fluid extract to one pint of water, of which the dose is from one to two ounces. In making the infusion in the ordinary way, a covered vessel should always be preferred.

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* A. B. Taylor's process for obtaining a fluid extract of serpentaria is a very excellent one, and ought to be generally known. He directs to take of serpentaria root, bruised, twelve ounces; alcohol and water, a sufficient quantity. Mix the serpentaria with twelve ounces of water, and allow it to stand for twenty-four hours; then transfer it to a percolator, and pour alcohol gradually upon it, until a pint and a half of filtered liquor is obtained. Place this in an evaporating dish, and allow it to evaporate spontaneously, until reduced to six fluid ounces. To the root, exhausted by alcohol, add water, and displace till it is exhausted, or until about three pints have passed; evaporate this portion in a water-bath to six fluid ounces, mix the two parts together, and filter. Each fluid ounce of this represents one ounce of the root. Dose, from fifteen to forty-five drops.—*Am. Jour. of Phar.*, vol. xx., p. 207.

The *syrup* of snake-root is not often used. It may be easily prepared by taking two ounces of the fluid extract, and adding to one pint of syrup. Dose: one and a half to three drams. In cases of children, this preparation might be preferable to the others.

The *compound tincture of snake-root*, as kept in the shops, from the Tildens' establishment, is made after the following formula:—

Fluid Extract of Snake-Root, - - - -	½ ounce.
" " Ipecac, - - - -	"
" " Saffron, - - - - -	"
" " Ladies' Slipper, - - -	"
Camphor, - - - - - - - -	"
Diluted Alcohol, - - - - - -	1½ pints.

Dose: one to one and a half drams.

This is an excellent antispasmodic tonic, possessing no slight alterative properties.

The Virginia snake-root enters largely into the composition of the "*compound tincture of Peruvian bark*" of the U. S. P., also the same preparation of the three British Pharmacopœias, and also the Edinburgh "*Electuarium Opii.*"

In *decoction* it is never to be used. The following formula will be found well adapted to many cases:—

℞.—Rad. Serpentariæ, - - - - - -	℥j.
" Colombo, - - - - - -	ʒij.
Cort. Cinnamon., - - - - - -	ʒj.
Aq. Bullientis, - - - - - -	℥vi.

Macerate for one hour, and strain. Dose: a wine-glassful.

℞.—Pulv. Serpentariæ,
Magnesiæ, Alb., - - - - - - *aa.* gr. xvj.
Pulv. Rhei, - - - - - - - gr. xij.

Mix. Divide in six equal parts. In dyspeptic affections, in nine parts.

℞.—*Powdered snake-root*, gr. xxiv.; *camphor*, grs. xlviii.; *conserve of roses*, q. s. Mix. Make eighteen pills—to be taken during the apyrexia, in malignant intermittents. ℞.—Powdered snake-root, contrayerva, aromatic snake-root, *aa.* ʒj.; preserved ginger, ʒvi.; syrup, q. s. Make electuary; ʒss. every four hours, as a febrifuge. ℞.—Virg. snake-root, contrayerva, *aa.* ʒv.; boiling water, Oj. Macerate one hour, strain, and add tincture of Virginia snake-root, f. ℥ij. ℞.—Compound infusion of Virg. snake-root, fl. ℥xij.; tinct. of allspice, fl. ℥iv. M. Four spoonsful every six hours, in retrocedent and atonic exanthema. ℞.—Add fl. ℥ij. of vinegar to fl. ℥xvi. of last mixture. Dose, as above, in petechial typhus. ℞.—Virg. snake-root, ʒvj.; boiling water, fl. ℥viij. Infuse and strain; when cold, add sulphuric ether, fl. ʒij. One tablespoonful every hour. ℞,—Virg. snake-root, ʒvj.; vanilla, ʒij.; sherry wine, sufficient. Macerate for four hours, and add to each pint of the strained liquor, camphor, ʒss.; acetic ether, fl. ʒj.; syrup of cinnamon, fl, ℥ss. Dose, two spoonsful an hour, in low states of the system. ℞.—Virginia snake-root, ʒvj.; proof spirit, fl. ℥v.; water, sufficient to obtain six ounces of strained fluid; after one hour of infusion, add camphor, ʒss.; balsam of Peru, ʒj.; gum arabic, ʒij. Make an emulsion, and add acetic ether, fl. ʒj. One spoonful every hour, in cases requiring stimulation.

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Atropa Belladonna.

(BELLADONNA—DEADLY NIGHTSHADE.)

CALYX campanulate, persistent, in five-pointed divisions: corolla campanulate, five-lobed, longer than the calyx: five stamens included irrawl-shaped threads, carrying round, heart-shaped anthers. The fruit is fleshy, rounded, a little depressed, in two cells, containing a great number of small, reniform seeds.

Belladonna has a perennial root, thick and fleshy, an erect stem, two to three feet in height, dichotomous, cylindrical, villous; leaves alternate, sometimes doubled; petioles short, oval-pointed, almost entire. The fruit is a roundish berry, at first green, then red, and finally nearly black; it is surrounded at the base by the calyx. The Belladonna is a native of Europe, though it grows vigorously under cultivation in this country.

It contains, according to Brandes, malate of atropia, 1.51; gum, 8.33; starch, 1.25; chlorophylle, 5.84; ligneous matter, 13.7; osmazome, salts, &c.

A dangerous narcotic; every part of the plant is poisonous; and children and the ignorant have so often suffered from eating the berries, the beautiful appearance and sweet taste of which render them very alluring. The symptoms which they induce are those of intoxication, accompanied with fits of laughter and violent gestures, great thirst, difficulty of deglutition, nausea, dilatation of the pupil, with the eyelids drawn down, redness and tumefaction of the face, stupor or delirium, a low and feeble pulse, paralysis of the intestines, convulsions, and death. In medicine, Belladonna is not only narcotic, but diaphoretic and diuretic.

Belladonna has been often employed, internally, in the treatment of neuralgia. This means is particularly successful in the neuralgias of the face, when the diseased nerve is deeply seated. The application of the extract of Belladonna to the skin, by coating the epidermis, have an incontestible efficacy when the affected nerve is situated superficially. The good effects of the endermic method have been tested when the nerve is deeply seated, as in the case of sciatica. It has been employed with success in the endermic nervous colic of hot countries.

The preparations of Belladonna, whether administered internally, or externally applied, succeed very often in calming and soothing pain without exerting somniferous properties, as has been pretended. They have been especially employed in combating spasmodic contractions of many organs, as the anus, ureters, and neck of the uterus. It is employed often for dilating the eye in many species of ophthalmia; sometimes by applying, with friction, the extract, to the eyelids and eyebrows, and sometimes by dropping into the diseased eye a little of the juice of the plant, or of the softened extract. This means has been employed by many surgeons, not only before the operation for the cataract, but even after the operation has been performed, to prevent inflammation of the iris, so common and so fatal in this operation. Belladonna has been successfully employed in incontinence of urine and spermatorrhea. It is considered a powerful remedy in these affections.

It has been employed against cancers, ileus, epilepsy, tetanus, insanity, &c., as also as frequently in hooping-cough. Some German physicians have attributed to Belladonna the remarkable property of being prophylactic of scarlatina, which assertion has been confirmed by numerous instances. M. Guersant had recourse to this practice whenever he was called to a family where one of its members was affected with scarlatina. He has often remarked, that so often as his patients took Belladonna the malady did not appear, and that when the administration of this agent ceased, some days after scarlatina developed itself, but then it was very light. This malady is so dangerous when it is epidemic that no means should be rejected which presents itself to prevent it, even though its efficacy be not yet perfectly demonstrated. The alcoholic tincture has been administered, in such cases, in doses of two drops in a potion, to be taken during the day, for a child from one to three years of age; from three to six years, three drops—increasing one drop of the tincture for each year additional.

Belladonna has been given with great success in incontinence of the urine, so frequent in children and youth, and unfortunately so stubborn, as every one knows. Two remarkable cases in the practice of Blache are on record. A young woman of eighteen years, and a young man of fifteen years, owed their cure to this remedy, after having in vain tried the best means made use of in similar cases. Sulphurous baths, sea-bathing, refrigerating, and astringent applications; tonics and ferruginous preparations, internally; tannin, ergot, nux vomica—all had failed, and this notwithstanding that the most available precautions were employed with an unceasing perseverance. After six months their health was restored, but the use of the remedy in each case was continued.

The efficacy of the medicine in the treatment of this affection depends upon its being continued for a length of time, and being increased at intervals more or less distant.

"Belladonna has been employed with success as an anodyne in neuralgia, tic-douloureux, arthritic pains, painful ulcers, and glandular enlargements—also as an antispasmodic, resolvent, and discutient; has been found beneficial in epilepsy, mania, hysteria, chorea, and other maladies of the cerebro-spinal system."—*Pareira.*

It has been highly recommended in hooping-cough, in the advanced stages of which it is undoubtedly beneficial. In neuralgia it is one of the most effectual remedies in our possession, and it may be employed to give relief in other painful affections. Hufeland recommends it in the convulsions dependent on scrofulous irritation. It has been prescribed in nervous colic, chorea, epilepsy, hydrophobia, tetanus, mania, paralysis, delirium tremens, amaurosis, incontinence of urine, rheumatism, gout, dysmenorrhea, obstinate intermittents, scarlatina, dropsy, and jaundice. It is said to have been effectually employed in several cases of strangulated hernia. (Wood.) The extract, rubbed upon the areola of the breast, has been found quickly to arrest the secretion of milk, and, upon the abdomen, to relieve the vomiting of pregnancy, and other irritations sympathetic with the gravid uterus.

M. Popper asserts that small doses of the tincture of Belladonna, frequently administered, will cure quinsy, if it be not complicated with syphilis, often in the short space of twenty-four hours. He says he rests this assertion on an experience of more than five hundred cases.

Effects of Belladonna in the Third Stage of Pneumonia.—On the 2d of October, 1852, towards noon, M. X., a monk, at Berguac, twenty-five years of age, pale, dark complexion, of a lymphatic, sanguine temperament, of strong constitution, enjoying general good health, was imprudent enough, after inordinate exertions in the duties of his profession, to take, at a single draught, a large glass of iced water. During the night he was taken with a chill—called at six o'clock on the evening of the 3d to see him—found the following symptoms: anxiety, severe headache, eyes injected, white tongue, mouth open, intense thirst, nausea, sleeplessness, urine scant with sediment, burning dry skin, frequent pulse (115), dyspnœa, painful persistent cough, *tearing* expectoration of viscid mucous, mixed with air and red blood—severe pain in the right lung, chiefly under the nipple—dullness over the interior two-thirds of the lung of that side, with loud pneumonic crepitation. In spite of very low diet, appropriate drinks, rest, four free bleedings from the arm (all more or less cupped), within the space of thirty-six hours from my first visit, in spite of several large doses of tartar-emetic and ipecacuanha, two leechings, one to the painful part, the other around the inside of the ankles; in spite of blisters on the breast, and on the legs, synapism, emollient clysters, &c., the disease continued to progress.

At 10 o'clock, on the evening of the 9th, the local and general symptoms had continued to increase in number and gravity, until it was obvious that red hepatization of the lungs had taken place; face pale and anxious; extreme debility; lying all the time on the back; delirium—subsultus tendinum, vague expression, stupor, dry tongue; insatiable thirst for cold water; dry skin; eyes partly open; the eye-balls turned up; the pupils dilated; the retina slightly sensible to strong light; passing urine involuntarily; pulse low, interrupted, and diaphragmatic; respiration hard; cough scant, and difficult expectoration; sputa thick, and discolored; dullness increased and extended; respiratory murmur, well over the seat of the disease; *rales* and other bronchial sounds; cold extremities; tendency to sinking towards the foot of the bed.

Under the above circumstances, with no reasonable hope of evading an unhappy termination by ordinary means, we prescribed fifteen centigrammes of the aqueous extract of Belladonna, mixed with ten grammes of "*sirop de capillaire*," taken at one time.

At the end of an hour and a half the effect of the Belladonna was obvious—the patient slept tranquilly and quietly. In a few minutes his temperature augmented, face became animated, warm, vapory, and abundant perspiration covered the body; the pulse rose, became stronger and less frequent; respiration was relieved; the symptoms all became more favorable. After two consecutive hours of repose, the patient awoke free from delirium, and feeling much better.

At 10 o'clock in the morning, the pneumonia, which had to a certain degree reassumed the characteristics of the first stage, was in a fair way to terminate by resolution.

Convalescence continued up to the 16th of November, when it was complete.—*De la Rue* (*translated from the Revue de Thérapeutic Médico Chirurgicale*).

Dr. Billings Reports a Case of Mammary Abscess Relieved by Belladonna.—Having recently had a case of this disease, and the manner in which it was treated resulting so favorable, that I am induced to offer it for publication. It is one of those diseases which is not unfrequently attended with serious results, and any suggestion in regard to its treatment may be gladly received by the profession. I shall offer nothing new in regard to its medication at the present time, but simply corroborate the truth of a method already known, so far as the following case will do it:—

On the morning of the 24th of February last, I was called to visit Mrs. D., who was suffering, to all appearance, from a mammary abscess, which must have terminated in suppuration, had there not have been more than ordinary means resorted to.

She had recently been confined with her second child, which she was weaning on account of her ill health. Upon examination I found the right mammary gland enormously swollen, hard, knotty, throbbing, and so painful as to render the most gentle means for removing the milk unbearable. There was much fever, a quick, hard pulse, with great depression and anxiety of the mind.

I ordered an application of the extract of Belladonna spread upon a linen cloth in the form of a plaster, to be immediately applied, leaving a small aperture in the centre for the nipple to pass through, which was afterwards to be covered with a poultice.

After administering a cathartic to move the bowels, which were very costive, and the tincture of veratrum viride, to be taken until the pulse was brought to its natural standard, I left my patient until the following day, when I found her improving beyond all expectation. The tenderness and pain was greatly removed, besides much diminution in the size of the gland, and its hardness. The veins, which had been engorged and obstructed in their passages, presented a much more natural appearance. There was but little febrile excitement, and a very marked expression in the countenance of rapid improvement.

I applied the breast-pump, and what remaining milk there was which had not flowed into the the poultice was removed.

The local application only was continued, when, on the third day, the breast had assumed its natural appearance, and she was perfectly well of the local difficulty.

David reports two cases in which the internal use of Belladonna led to the reduction of strangulated hernia, which seemed to demand an operation. He gave half a grain of the extract every half hour. In one case three, and in the other four doses were taken.

"In the twenty cases of hooping-cough cured by the use of Belladonna, the cough and hoop returned in a few cases on exposure to cold, or in disagreeable, windy weather; but, by combining the extract with syrup of ipecac, a few drops soon cured the cough and hoop; in only one case of this number was it complicated with inflammation of the lungs, and this case recovered. The average duration of my twenty cases was ten days after the hoop had commenced, when the case was free from complications, which shows the great advantage of this treatment. The ordinary duration of the disease, when treated in the usual manner, is from one and a half to three and a half months; even by prussic acid or the application of nitrate of silver, the average is given from two to three weeks."—*Dr. L. Turnbull.*

In the *British Medical Journal*, a case is reported of incontinence of urine in a child eight years of age, which had existed since its birth. She had been treated with purgatives, alkalies, blisters to sacrum, &c., without improvement. She was finally relieved by the use of one-eighth of a grain of extract of Belladonna, night and morning.

When epilepsy is not curable, it is of great importance to diminish the number of fits, which become multiplied by habit, and render the disease less and less amenable to treatment. For this purpose, M. Fredericq has advantageously used Belladonna; and he gives it in the following doses to several young epileptics at the hospital of Courtroy, reported incurable:—Extract of Belladonna, three grains; water, six ounces. A tablespoonful three times a day, and when premonitory symptoms are perceived.

In the *Gazette Hebdomaire*, there is reported a case of inguinal hernia, which was relieved after taxis had failed, by the administration of the extract of Belladonna, in three or four-grain doses every half hour. The tincture of Belladonna was also employed locally by means of a flaxseed poultice.

In the same journal there is also a report of a case in which Belladonna was administered, with very great relief to the patient. In this there was no protrusion of the bowel, but, from the symptoms, obstinate constipation, great pain, stercoraceous vomiting, &c., it was evident that there was complete occlusion of the bowel.

The Belladonna in this case was employed after an operation for artificial anus had been decided upon. The remedy was used in the form of an ointment, by friction; and as soon as complete intoxication was induced its good effect was perceptible.

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Arnica.

(ARNICA MONTANA.)

[Continued from April Number.]

ACCORDING to Richter, who, I will here remark, is very good authority, "some good may be expected from Arnica in all possible forms of disease in which there is a call for a strong excitement of the lymphatics, and an elevation of the nervous and vascular activity in the structures, more especially devoted to the functions of organic life—consequently in all kinds of glandular swellings, and the atrophies and schirrhosities of the liver, spleen, and lungs, dependent thereon; in blenorrhœas of every kind; in chronic humoral asthma; in chronic diarrheas, whether atonic or colliquative; in old catarrhs; in high grades of hypochondriasis, hysteria, jaundice, &c. To these complaints it will always be more or less applicable, according as the system at large, or the diseased parts in particular, shall be more or less deficient in vital power and reaction."

Richter employed it with success, combined with seneka, in the latter stages of peripneumonia, when a universal torpid condition existed, in connection with a scanty, difficult and viscid expectoration. In paralytic affections it has acquired great credit; but Richter regarded it as applicable only to such cases as have their origin in organic lesions. It has been used in hemiplegia succeeding apoplexy, in paraplegia, and in various partial palsies proceeding from lesions of the spinal marrow or nervous textures of the abdomen, and has shown itself particularly serviceable in palsy of the bladder and lower extremities; and Richter was of the opinion that much good can be expected of it only in recent cases of palsy, and that in such as are of long duration it generally fails; observing that in the palsies consequent upon apoplexy it must be given within the first six weeks, in order to produce any good effect. In short, he regarded it as appropriate to all diseases in which the powers of life are depressed, with diminished susceptibility of the system, torpor of the secernent organs, stagnation and obstruction, with a tendency to decomposition and gangrene; as peculiarly adapted to persons of a leucophlegmatic habit, but contra-indicated by augmented excitability of the nervous system, by general venous plethora, by active congestion of the brain or other important organ, and by great weakness and susceptibility of the stomach and bowels. When long used it tends to confine the bowels, and in large doses is apt to impair digestion.

In intermittent fever it has been highly recommended, and has been found useful particularly in cases of long standing, complicated with a peculiar morbid condition of the nervous system, sluggishness of the abdominal viscera, enlarged and indurated spleen, œdomatous swellings of the belly and lower extremities, also in intermittents of a typhoid or malignant character; and in these diseases it may be advantageously associated with bark—fifteen grains of the powdered flowers, or one to two drams, in the form of an infusion, are given every hour during apyrexia. The root is said to be preferable when the complaint is associated with diarrhea. In the phlegmasiæ, it can only be safely used when they are complicated with a prostrate or typhoid condition of the system—have terminated in gangrene, or have assumed a chronic form.

Dr. Wood remarks that in the feeble forms of dropsy, and in cases of extravasation, either sanguineous or lymphatic, it would appear to be adapted by its property of promoting absorption; and in the latter affections it is considered as one of the most effectual remedies. It is possible that in this way it may have proved useful in obviating the effects of falls, blows upon the head, and other external violence, in the treatment of which it has, for a long time, enjoyed much reputation, both as an internal and external remedy. By promoting the absorption of fluids effused within the cranium or spinal canal, it may tend to relieve the paralysis occasioned by the pressure of these fluids upon the brain and spinal marrow, and by a similar operation upon effusions exterior to these cavities may, in some measure, remedy those embarrassments in particular parts resulting from pressure upon the nerves which supply them.

Dr. Buchanan speaks highly of its use internally and externally, and says that it sometimes irritates the skin; but this proceeds from its being used in too great strength or quantity; or it may be possible that there may be some peculiar idiosyncrasy which predisposes the skin of some persons to become irritated by it. This effect has been frequently observed when the fluid extract has been used in full strength, and plainly suggests the dilution of it before use externally.

In administering Arnica, it is proper to begin with a small dose of the preparation proposed to be used, and gradually to increase it till some positive effects are experienced. In typhus fever and other acute diseases, large doses are directed at the outset. The dose of the powder is from five to thirty grains. The tincture is directed to be prepared by two ounces of the flowers to sixteen ounces of diluted alcohol; the minimum dose of the powder being five grains, an equivalent of tincture should be forty drops.

The recent preparations of a fluid extract, which represents for one fluid dram one dram (or sixty grains) of the flowers, has a dose of five to thirty drops, and is a more convenient form of administration than the powder, and much stronger than the tincture, which is readily produced from the former by adding two ounces to one pint of diluted alcohol.

In diarrhea complicating typhus fever, it is used often with serpentaria, and if the fluid extract is employed, in the following proportion:—

Fluid Extract of Arnica, - - - - - -	2 drams.
" " Serpentaria, - - - -	2 "
Syrup, - - - - - - - - - - -	1 "
Oil of Peppermint, - - - - - -	10 drops.

Dose, one-fourth dram every two hours.

Fomentations of Arnica and rue may be made readily by using the

Fluid Extract of Arnica, - - - - -	2 ounces.
" " Rue, - - - - - -	1 "
Water, - - - - - - - - -	9 "

Very useful in contusions.

A.

Uva Ursi an Uterine Excitant.

By Dr. William Johnson, of White House, N. J.

The use of this remedy in the place of ergot has been suggested by several physicians, and as far as my own somewhat limited experience is concerned it is favorable to its employment. Every physician often finds it desirable in the course of a labor to awaken the dormant energies of the uterus, and arouse it to more vigorous action. Its action may be too feeble from the commencement of the parturient process, or it may become so in its progress. The most prominent of uterine excitants is the secale cornutum. Its action, I believe, is undisputed, and equal to any article of the materia medica. Its peculiar action on the uterus is apparent in fifteen or twenty minutes, after its exhibition, in continuous pain. This kind of contraction has its disadvantages as well as its benefits; when given with a view to restraining hemorrhage it is the very thing we want, but when given for the expulsion of the child, this kind of contraction, whilst effectual, not unfrequently proves destructive of life. It is an article which certainly requires great caution in its exhibition, and in inexperienced hands has, without doubt, been the source of mischief, and suggests investigation for other articles which may supply its place as a uterine excitant.

M. Beauvais strongly recommends the substitution of uva ursi, as being as efficacious and far more innocent in its operation. In ordinary delayed labor he gives fifteen grains, in infusion, every hour; but when rapid effects are desired, as in metrorrhagia, a decoction of half an ounce to a quart of water is directed, in divided and frequent doses.

Dr. Harris, of Fayetteville, Ala., in the *Virginia Medical and Surgical Journal*, relates cases in which he has employed a strong decoction of uva ursi in *accouchements*, where the ergot of rye would ordinarily have been employed, and found its employment followed by vigorous pains, which soon cause the expulsion of foetus and placenta. Dr. H. prefers this medicine to ergot of rye, inasmuch as it does not cause such strong contractions as the latter, which are so very painful to the mother and dangerous to the child.

M. Gauchet was induced to give it a trial, from the prejudicial reports concerning the effects of ergot. He gave it in a case of lingering labor. The patient was forty years of age, and pregnant for the fourth time. After ten hours of great suffering, little progress had been made, though the os uteri was soft and tolerably dilated. Half an ounce of uva ursi leaves were now infused in a quart of water, for an hour, and a teacupful of this infusion was taken every half hour. After the first three doses, the contractions, which had almost entirely ceased, became vigorous, and the patient was delivered of a living child three hours after taking the first cup.

My own experience with the article is so limited, that what I advance will be considered more suggestive than didactic. I will, however, relate a couple of cases in which I have exhibited the article with apparent benefit.

I gave the uva ursi to a lady about twenty-five years of age. The case was *primi para.* She had been all night in labor; was very impatient and dejected. I saw her at 10 o'clock A. M. The membranes had ruptured, and the child's head was about half way through the superior strait. The pains, which had been active, had died away, so that for two hours she was without any. I gave her a strong decoction of uva ursi—about three teacupsful. Pains resembling the natural contractions soon came on, and the child was expelled. I gave the article about 12 o'clock, and she was delivered before 2 o'clock.

The wife of S. W. had the membranes ruptured at 10 o'clock at night, and I saw her at 4 o'clock the following afternoon. She was at full time. The os uteri was open as large as a dollar, and the edges very tumid, but supple and very dilatable. The head was above the superior strait, and was in the most favorable position for traversing the pelvis. The pains were very inefficient, and at long intervals. The patient was of the opinion that this would be her last labor (she has had four or five children), and was exceedingly down-cast. I assured her that there was no reason whatever for her extreme dejection, and that matters were in a favorable train for delivery, but that she must have patience, and that her labor would probably be protracted during the night. As there was nothing, however, in her case to forbid the use of uterine excitants, I prepared a strong infusion of uva ursi—more than half an ounce of uva ursi to one pint of boiling water. I commenced at 7 o'clock to give the medicine, in doses of one ounce every ten minutes; and before the patient had taken half a pint of the infusion, the pains became so intense that I discontinued its further use. The pains recurred every five minutes, and was violently expulsive. She was delivered of a child weighing nine and a half pounds. So powerfully had the uterus been aroused into action, that the placenta was thrown off before I could tie the cord. The child was very vigorous. I left the house before 9 o'clock. The patient did well.

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Tasteless Medicines.

By J. W. Thompson, M. D., of Philadelphia.

"Conservative surgery" and "rational medicine" have been deservedly attracting a large share of attention within the last few years; and as a most important branch of the latter, I beg leave to call attention, in a few words, to the subject which the desire for handsome and reliable preparations has kept, until recently, entirely too much in the back-ground. Occasionally an effort has been made, and something accomplished, by some one who has been put to his wits' end by the weak stomach or obstreperous character of a willful patient, who has literally refused to take his nauseous prescriptions, choosing instead to run all the hazards of disease.

But only to a very limited extent have been these improvements, and the sick are still required to take such doses as a well person would loathe to utter detestation.

I am fully persuaded that such should not be the case, now that chemistry and pharmacy are being so wonderfully developed, and think that the taste of nearly every article in the materia medica may be either nullified or masked, without interfering at all with its essential properties.

When this cannot be done as a fluid preparation, it can generally be as a jelly or a solid—the latter in pillular or granular form, coated with sugar, and avoiding that, to many, sickening "glycyrrhiz. pulv.," in which not a few continue to put up pills, because it answers the purpose, and because their fathers did so.

A great help in this needed reform is the advancement which has been made in the preparation of the concentrated extracts, and in the separation of the vegetable alkaloids.

It would have been a fruitless task to have attempted, with many of the crude drugs as originally administered, but now is within reach of every hand;

and let us see to it, one and all, that this step, which is to be the next great improvement in medicine, is taken right early.

In fact, we have no right as humanitarians to ask a patient to swallow nauseous doses, when we can minister to them in their affliction without offending the most delicate palate.

A few I know, who are grounded in the good old ways of antiquity, will say that it is all "fudge," and that when persons get sick they ought to be thankful for anything that will do them good. But by such prejudices we ought not, and will soon find that we *must not*, be guided. And those who hold them will, ere long, be classed in the same category with the surgeons who maintained that pain under their operation was a good thing, and therefore opposed the use of anæsthetics.

In the prosecution of this work (which I am happy to find is already occupying the attention of some of our pharmaceutists,) I would throw in a caution as to the *size* of pills. It is easier generally to give two, or even half a dozen small ones, than to administer a *bolus*, which, if not a relic of barbarism, is at all events rather barbarous treatment.

As to the alkaloids, I am looking forward with confident anticipation to the time when we shall have in this form the active principles of nearly all our vegetable remedies, and hail every one brought forward as the harbinger of brighter days in store. And I do so because I see in these a greater certainty of nature and action, a more manageable form, and, parodoxical as it may appear, a less dangerous article; because here we can know what and what strength we are giving, which, either with the crude drug or the old extracts, would often resolve itself into a very difficult problem, unless ascertained by experimental administration of each individual specimen.

Then, as we have in this form the principles of a goodly number of our medicines, let us use them, and at the same time urge on our resources until we can command the whole in the same manner; and once fairly tried, they will not willingly thereafter be done without by any member of the profession.—*Phil. Med. and Surg. Reporter, May* 12.

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Tape-Worms.

By E. C. De Puy, M. D., of Freeport, Ill.

Was called, October 13th, 1859, to see Mrs. S., a pale, delicate woman, with a "dark, leaden appearance of the contour of the eyes," aged twenty-nine years—the mother of two children, the youngest five years old. Found her just recovering from an attack of convulsions.

After a careful examination for the cause of the attack, I could not find anything wrong, except some decayed teeth, which were very sore, and had roubled her for some time. The functions of the various organs, digestive tube, lungs, heart, urinary and generative, were apparently healthy. As she complained of a peculiar sensation—epileptic aura—about her jaws, and running from them down the back of the neck, I was led to think the decayed teeth the cause of all her trouble. They were all extracted by her dentist, and she was put upon vegetable bitters and iron to improve her general health. Her appetite improved, and she said she felt better, only sometimes she was very nervous, and that ugly sensation about her jaws and neck troubled her some.

She remained thus until the night of the 25th of February, 1860, when she had three attacks of convulsions, which were relieved by tincture of gelseminum, fluid extract of scutellaria, chloric ether, (*aa.*), in teaspoonful doses, and chloric ether by inhalation; also, friction along the spinal column, with stimulating liniment. On the following morning another careful examination was made to ascertain the cause of the convulsions. The urine was tested for albumen by nitric acid and heat, and found perfectly free—no coagulum. The bowels moved every day, and appeared perfectly natural; function of the womb healthy. Ordered hydrocyanate of iron, ʒ i.; extract of hyoscyamus, ʒ i.; mucilage, q. s. to form mass—to be divided into 120 pills. Dose, one pill three times a day, to be increased according to the effect produced. Also, for her nervousness, fluid extract of scutellaria, ℥ ii.; fluid extract of pruni virginianus, ℥ i.; simple syrup, ℥ i., in teaspoonful doses, as occasion required. Improving, but complains of a constant spitting of offensive mucous, insensibly rising up in her throat, which symptoms, taken in connection with the nervous phenomena, led me to suspect the presence of worms. To operate mildly upon the bowels, and partly as a vermifuge, she was ordered to take from three to five-grain doses, every four hours, of the following compound:—Podophyllin, ʒ i.; pulv. Jamaica ginger, ʒ i.; sugar of milk, ℥ i. Mix intimately. Also, to take two-grain doses of quinine three times a day, for its tonic effect on the nervous system. The powders operated very mildly but effectually upon the bowels, producing very offensive stools, of the consistence of tar, mixed with flattened seybala, representing the appearance of having been retained in the bowels for some time; also, what we but little expected, a large number of pieces of tape-worm, from a single joint to half a yard in length. The powders were continued, as it was evident that they were doing good in breaking up the habitat of and otherwise disturbing the worm. The diet was very light—a little panada and wine.

After three or four days of such treatment, thinking that the worm was sufficiently exposed to be operated on by vermifuge or vermicide medicines, she was ordered a wine-glassful of the following decoction, to be taken every half hour or hour, as the stomach would bear, until all was taken:—Bark of pomegranate root, ℥ ii.; boiling water, Oii. Steep down to one pint. To be followed, if the bowels were not much moved, or the worm not passed, by a dose of castor oil and turpentine.

Commenced taking the decoction about noon. At 11 o'clock at night the husband called and said that the decoction was all taken, and the bowels had just moved, and he thought the worm had passed; and also that she was very faint, but free from pain, and otherwise comfortable, and desired to know if he should give the oil and turpentine. She was ordered a little wine and water, and rest until morning, when I visited her, and found that the bowels had just moved again, and that she was very comfortable. The last stool contained no more joints of the worm. The stool which passed at 11 o'clock contained the tape-worms (tænia solium), which I send you for the College Museum. The bowels have moved without purgative medicines since, and contain no more of the tape-worm.

The family are "good livers;" have not eaten much pork for years; they are natives of New York State. Have been in this city some four years. The patient now (March 15th, 1860,) says she feels better than she has for years. She is very nervous sometimes, but feels nothing of that drawing of her jaws and neck.

She is now taking the hydrocyanate of iron pills and Tilden's aromatic calasaya wine, as a tonic and preventive, as worms are supposed not to relish aromatic bitters. It is encouraging for the patient to know that there are fully as many "heads as tails" in the mass of worms which were passed.—*Chicago Medical Journal, April,* 1860.

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Gelseminum in Fever.

By I. M. Goss, M. D., of Mulberry, Jackson County, Ga.

Having seen many discrepancies in regard to the real merits of this article, I will give in detail my personal experience with it. I have frequently noticed communications in the different eclectic journals, and in many of them the idea is conveyed that gelseminum will not permanently cure fever, without quinine or some other anti-periodic; and the writers advise that quinia should be given after the gelseminum. This may have appeared so to some; but my trials with it, recently, have convinced me to the contrary. The different opinions may have originated from the different preparations of the drug. There is a difference in the therapeutical value of different preparations of it; the extract has not proved as active in my hands as the tincture, particularly in fevers of a periodical character. The tincture of the dried root has not done with me as well as that of the fresh article. The first trials that I made of this medicine were with the extract, and then the tincture of the dried root, neither of which proved satisfactory to me, and I was ready to conclude that the medicine was overrated; but I have since been using a concentrated tincture of the fresh root, and now conclude that it has been underrated. Last fall I was frequently called to cases of remittent and intermittent fevers, which were of long standing, either from neglect or routine treatment. In one case I used all the usual anti-periodics, as cornine, bebeerine, quinia, iron, &c., but without success. I gave the above in increased doses until I produced the specific effects upon the nervous system, as headache, buzzing in the ears, &c., but still the chills would return—sometimes every day, for a while, then every other day. Thus the case continued for several weeks, until I despaired of success with the other anti-periodics, so I determined to try the tincture of gelseminum. Accordingly, I left an ounce of the tincture of the fresh root, directing it to be given in doses of thirty drops every two or three hours, until the eyes were affected; then the medicine was suspended until that passed off, then again resumed as before, and so on, until the fever was broken. I saw the patient just as his chill was gone off, and commenced the tincture of gelseminum immediately. The fever did not rise very high, nor continue long, nor did the chill ever return. The patient recovered from the time he commenced the gelseminum, and was soon up at his usual avocation. Now, what still more astonished me, was that the medicine never affected his eyes in the least, yet it suspended the chills immediately, after all the above-mentioned anti-periodics had totally failed, though they had been given in large doses—viz: five to ten grains per day, or more—for several weeks. I had frequently combined the tincture of gelseminum with the other anti-periodics before, and met with very prompt success; yet I attributed it to the other articles, but this time I determined to try the gelseminum alone.—*Eclectic Medical Journal, May*, 1860.

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Case of Puerperal Fever.

By Dr. A. P. Knowlton, of Brecksville, Ohio.

I was called at 12 o'clock M., Jan. 14, 1860, to see Mrs. M., seven and a half months gone in her tenth pregnancy. Found her laboring under an acute attack of pleuro-pneumonia. Bled her thirty ounces at the arm before relief was obtained, then prescribed the following:—

℞.—Hyd. chlo. mit.,	gr. xv.
Ant. et potas. tart.,	gr. i.
Morp. sulph.,	gr. ij.
M. ft. pulv.,	No. v.

S. One to be taken every three hours.

Patient rested well till half-past 8 o'clock in the evening, when she was taken with labor pains, and her child born in less than an hour. The bowels were moved with oil and turpentine about 12 o'clock midnight.

Jan. 15th—Peritoneal inflammation supervened; pulse 130; lochia suppressed; tympanitis abdominalis; delirium; cold, clammy sweat; tongue loaded with dark brown coat; teeth with sordes. The following prescription made:—

℞.—Pulv. ipecac.,	gr. vj.
Morph. sulph.,	gr. iij. m.
Ft. chart.,	No. vi.

S. One to be given every four hours.

℞.—Tilden's fluid extract veratrum viride.

S. Four drops to be given every four hours, alternately with the powders; also, abdomen fomented.

16th—Pulse 120; no other perceivable change; calomel, ipecac, morphia, continued the same; veratrum viride increased to five-drop doses; ung. hyd., half ounce, used in friction over abdomen, followed with warm turpentine.

17th—Pulse 75; abdomen much distended; increased tenderness on pressure; delirium and subsultus tendinum. The same treatment continued.

18th—Pulse 65; no other decided change; treatment the same.

19th—Symptoms in *statu quo;* treatment the same.

20th—Symptoms more favorable; little show of lochia; the same treatment continued.

21st—Patient decidedly better; lochia fully restored; veratrum viride continued in three-drop doses, alternated with morphia; beef tea ordered.

22d—Patient improving.

23d—Convalescent.—*Cleaveland Medical Gazette.*

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Ipecacuanha instead of Tartar Emetic in Croup.

By J. C. Shapard, M. D., of Flat Creek, Tenn.

I am strongly impressed with the opinion that much harm has resulted from the employment of tartar emetic in croup. It is but justice, however, to admit that this opinion is not the result of long experience or extensive observation. And, moreover, according to an ancient sage, an opinion is only the half-way house between ignorance and knowledge. I shall content myself with expressing the opinion, without attempting to estimate its value.

I think I have seen fatal prostration result from the use of tartar emetic in infantile cases, in my own practice and in the practice of other physicians; physicians, too, who were regarded "skillful and scientific," and who deservedly rank high in the profession. That it was prescribed *scientifically* in the fatal cases alluded to, I have not a doubt—that is, that according to the "teaching" upon the subject it was *indicated* in those cases. It is the province of our teachers to lead the van of our profession, and give "the word of command." They tell us to use tartar emetic in croup; but in justice to them it must also be said they enjoin caution in its administration, and this injunction may not be sufficiently regarded by the subalterns in the professional army.

Among the pathological elements of croup are inflammation, with or without fibrinous effusion, and spasm. Tartar emetic, in sufficient doses, will arrest the inflammation, throw off the fibrinous product; but in accomplishing these results a dangerous prostration is much to be feared. And when we remember how many physicians there are who are more inclined to the heroic than the prudent, it becomes a desideratum to find a remedy that will be as efficacious as the tartar emetic, without its dangers. According to M. Petit, ipecacuanha is that remedy.

M. Petit says, in a recent journal, he has been practising medicine in Paris fifty-two years, and that during this long career he has not lost a single case of croup. He treats the disease with emetics—generally ipecacuanha—tartar emetic *never*. He administers the ipecacuanha in syrup, in infusion, or in powder, according to the age or urgency of the case, but always in emetic doses. He prefers the ipecacuanha, because he considers it a superior emetic—because it can be administered in large doses with impunity—and for the reason that those who give their attention to the little patient are in no danger, through error or inexperience, of injuring it by heroic practice. He thinks it is the enemis that cures the croup—that the vomitings and efforts to vomit detach and throw off the false membranes—that the general shock and the perspiration produced by the vomitings modify the organism in such a manner as to prevent the formation of new false membranes. But in order to obtain these desirable results, he says it is necessary to insist on the emetic without the fear of fatiguing the little patient, as long as the indications for its use continue, and to return to it after having obtained these results should the croupal cough and dyspnœa return, without waiting for the respiration to become wheezing. And if the physician wishes to be sure of curing his patient, he should not content himself with prescribing the emetic, but he should administer it himself, or have it administered in his presence; and he should not leave the patient until the respiration is completely relieved, and it can rest easily in the horizontal position.

M. Petit has met with extraordinary success in the treatment of croup—greater, perhaps, than most other physicians have obtained from any treatment whatever, even the emetic plan; but his long-sustained eminent position is a guarantee of his good faith and scientific attainments; and although others might not be as successful with the ipecacuanha as he has been, yet I think its substitution for tartar emetic would lessen the mortality of croup.—*Nashville Journal of Med. and Surg.*

Selections.

Extensive Operations for the Cure of Neuralgia.—Dr. Carnochan, of New York, whose surgical feats are very apt to find their way into the newspapers, has lately had a case that taxed his utmost skill and ingenuity. The patient had, for more than ten years, been a martyr to the most excruciating facial neuralgic pain, had been a patient in the New York Hospital, and been subject to every variety of medical and surgical treatment. No less than *fourteen* surgical operations were performed on his face by different surgeons, one of them by the venerable Dr. Valentine Mott, and six of them by Dr. Carnochan. In his first operation Dr. Carnochan laid open his face, trepanned the maxillare, separated the trunk of the second branch of the fifth pair from its connections as far as the posterior part of the antrum, and exsected about an inch of the nervous trunk. This was followed by instant relief, and the patient was able to follow an active business for a year. At the expiration of this time, however, the pain returned, and the patient again sought Dr. C., who performed five more operations on him. The last, which promises to be successful, consisted of the exsection of the remaining stump of the trunk, close to the foramen rotundum, in immediate connection with the ganglion of Meckel—thus insulating that ganglion and its branches from the encephalon. One hardly knows, in this case, which to admire most, the bravery and fortitude of the patient, or the boldness and confidence of the surgeon.—*Phil. Med. and Surg. Reporter, April* 21.

On the Local Employment of Chloroform in the Reduction of Dislocations.—M. Orliac, a French provincial practitioner, relates two cases of recent dislocation of the shoulder, in which rapid and painless reduction was accomplished. This result he attributes to having surrounded the shoulder with, and placed in the axilla, compresses imbibed with ten or twelve grammes of chloroform, these being applied two or three minutes prior to and during the attempt at reduction. In this way, he observes, assistants may be dispensed with (an important matter in country practice), and pain be prevented, without any danger being incurred.—*Moniteur des Sciences Médicales, and Atlanta Med. and Surg. Journal.*

Employment of Sambucus Nigra in Dropsy.—M. Reyssie, a Belgian practitioner, states that he has long employed the juice of the root of the sambucus as an excellent purgative in dropsy. The bark of the fresh root must be detached by scraping, and the juice is extracted from the scrapings by pressure. The dose is a teaspoonful for an ordinary purgative; but as it does not cause colic or any other inconvenience, the quantity may, in the case of dropsy, be increased to a tablespoonful, which will often induce from twenty to thirty stools. It is a curious fact that the process of boiling, as in the preparation of a syrup, converts this purgative into a diuretic, which may also be of great use in dropsy.—*Revue Med., and Med. Times and Gazette.*

Ill Effects of Tight Bandaging.—Dr. Dalton, of Aberdeen, in a letter to the editor of the *Buffalo Medical Journal*, relates a case in which a negro boy, aged sixteen, lost his leg from the effects of tight bandaging in a case of fracture. Dry gangrene followed, and amputation was rendered necessary. A somewhat similar case occurred in our own practice not long since, in which an ignorant practitioner, in treating a fracture of the arm in the case of an interesting little girl, applied the bandage so tight over a rude splint as to cause the death of the part. On our removing the bandage, a week after its application, gangrene and death of the arm was manifest, and, at our request, amputation was performed by Prof. Pope. Young surgeons should be especially careful in the application of bandages, to see that they are not too tight. —*St. Louis Med. and Surg. Journal.*

Alum as a Remedy in Croup.—A correspondent of the *New Hampshire Journal of Medicine* states that for three years he has used alum in croup, and in all that time has not seen a fatal case which was treated with it from the beginning. He usually gives about ten grains, one in ten minutes, until vomiting is induced, using at the same time tartar emetic or the hive syrup freely—the latter subduing the inflammation, while alum has more of a repulsive action.—*St. Louis Med. and Surg. Journal.*

Ill Effects of Quinine.—Dr. Greenwald, of Cincinnati, reports a case, in the *Western Lancet*, in which decided and persistent hemiplegia was produced by the use of quinine. About twenty grains were administered in three doses, combined other remedies. The hemiplegia was preceded by ringing in the ears and a disposition to sleep. This case, with others on record, shows that the administration of quinine is not, under all circumstances, unattended with danger.—*Ibid.*

Iodate of Potassium in Affections of the Mouth.—Induced by the great success that has attended the chlorate of potassium in affections of the mouth, MM. Demarquay have tried the efficacy of the iodate of potassium in numerous cases of diphtheritic and gangrenous stomatitis. The success has been considerable, and that in which the chlorate has failed. The dose employed was from four to eight grains.—*Moniteur des Hôpitaux, and Georgia Med. and Surg. Encyclopedia.*

Tobacco was prohibited in the Philadelphia county prison nearly a year ago, and has been found beneficial and satisfactory in its influence. Many of the prisoners, who were refractory at first, have become accustomed to the privation, and express themselves satisfied with the beneficial effect of the regulation. The procedure is suggested to similar institutions in other States.

Chloroform in Sleeplessness.—Fonssagrives recommends (*Bull. de Thér.*, 46, p. 401,) 5-10 drops of chloroform in mucilaginous mixture, in agrypny, when opiates are ineffectual or contra-indicated.—*Phil. Med. and Surg. Reporter, April 7.*

Sulphate of Copper with Opium in Diarrhœa from Teething.—Among other therapeutical news, we notice, in a recent number of *Schmidts' Jahrbücher*, the following formula, which Prof. Eisenmann, of Würzburg, has found very efficient in diarrhœa of children from teething, viz:—Cupri sulphat., ¼ gr.; pulv. opii., ⅓ gr.; pulv. sacch., q. s. Three times daily one such powder.—*Ibid.*

"Extractum Sanguini."—Dr. Foy (*Bull. de Thér.*, 62, p. 121,) recommends of the extract sanguinis of calves, oxen, and lambs in all anæmic condition (as chlorosis.) He directed the preparation of gelatine capsules (with ten parts of extract sang. to one of sod. phosphit.), each containing from four to eight grains, of which he gives ten, fifteen, and sometimes twenty a day.—*Ibid.*

Relief of the Tenesmus of Dysentery.—Ansaloni, in his inaugural dissertation, reports the very favorable results obtained by Dr. Leclerc, of Tours, by the combined employment of belladonna, or stramonium and calomel, in dysentery. A large plaster of extract of belladonna, or stramonii (℥ iss.), is placed on the regio pubis, and every morning and evening for a few days a grain and a half of calomel administered. The belladonna and stramonium may be alternated. Tenesmus soon yields to this treatment, as well as all other symptoms of dysentery.—*Phil. Med. and Surg. Reporter.*

Juice of Chelidonium Majus has been locally applied with the most satisfactory results in cases of great itching eczema, injuries from the nettles, and other itching diseases of the skin, by Grand-Clement (*Bull. de Thérap.*, 46, p. 336.) Mixed with an equal quantity of glycerine, it can be preserved and used for the same purpose at times when the fresh plant cannot be obtained. —*Ibid.*

The Tea Plant is cultivated in Louisiana without any difficulty. It has shown its power to withstand the hottest days of Louisiana, also the late freezing weather.—*Hygienic and Literary Magazine.*

Absurdities.—To attempt to borrow money on the plea of extreme poverty. To judge of people's piety by their attendance upon church.—*Ibid.*

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Pharmacy.

FLUID EXTRACT OF MARSH ROSEMARY.

(*Statice Caroliniana.*)

Marsh rosemary is exclusively a maritime plant; it is one of the few ornamental species of the salt marshes, and is very conspicuous for its purple tops among the grass during the summer months. The root is the officinal part, and is one of the most powerful astringents of our indigenous materia medica, possessing valuable antiseptic properties. Few vegetable substances, when chemically treated, give more distinct evidence of the presence of tannin—as high as twelve per cent by some who have analyzed it. The therapeutical uses of the root, therefore, are those of the most powerful astringents, and has long been in popular use in diarrhea, dysentery, apthous ulcerative affections of the mouth and fauces; and from its astringent and antiseptic quality it is peculiarly suited to correct the state of these local maladies, is said to be better suited than coptis trifolia, and is often combined with it on account of the tonic bitter of the latter.

Dr. Mott regarded it highly in dysentery, after the acute stages had passed—often with success, after various tonics and astringents had been used with no effect. In cynanche maligna, or putrid sore-throat, it is used as a gargle, and is frequently applied to the piles; and as an injection in chronic gonorrhea, leucorrhea, &c.

It has been chiefly used in the form of a decoction, sometime in the form of tincture. Its highly valuable properties suggests a more uniform preparation, in the form of a fluid extract, which may be made as follows:—

℞.—Marsh rosemary root,	1 pound.
Alcohol, of sp. gr., 871	q. s.

Reduce the root to a coarse powder, moisten with alcohol, then pack in a percolator, and cover it with alcohol of the above strength; allow it to digest three days, then displace gradually—returning to the displacer the first runnings, until twelve fluid ounces shall have passed. Continue the displacement with additional portions of fresh menstruum, until fully exhausted, which evaporate in a vacuum to four fluid ounces, and mix with the reserved, producing one pint of fluid extract.

The dose of the powder, estimated at ten to thirty grains, gives as a dose of fluid extract ten to thirty minims.

PILULÆ HYDRARGYRI.

A recent lot of blue mass gave the following *highly* medicinal component parts:—

Mercury,	7½	grains.
Earthy clay,	27	"
Prussian blue,	1½	"
Lard,	2	"
Soluble saccharine matter,	34	"
Insoluble organic "	12	"
Water,	16	"

One-third of mercury would have given 33⅓ grains. Sulphate of mercury was found in it, which was doubtless occasioned by the endeavor to heighten the color of the conserve of roses by means of sulphuric acid.

This is commended to the consideration of those who wish cheap medicines, and *imported preparations.* J.

FLUID EXTRACT OF CLEAVERS.

(*Galium Aparine.*)

Cleavers have, with many, been held in high repute in many diseases of the urinary organs, as suppression of urine, calculous affections, inflammation of the kidneys and bladder, and scalding of the urine in gonorrhea. On account of its refrigerant and sedative properties it is contra-indicated in diseases of a passive character, but is recommended in fevers and acute diseases.

A fluid extract has been suggested as the most convenient form of administration, as follows:—

℞.—Cleavers, in coarse powder,	16 ounces.
Diluted alcohol, of sp. gr. 896,	q. s.
Sugar,	3 ounces.

Moisten the coarsely powdered cleavers with the menstruum, then pack in a displacement apparatus, and cover with the menstruum; allow them to remain forty-eight hours; draw off and set aside twelve fluid ounces, and continue the displacement until what passes has none of the bitter or acrid taste peculiar to the plant; evaporate in a vacuum to eight ounces, to which add the sugar, and dissolve; then continue the evaporation to four fluid ounces, and add to the twelve ounces previously reserved, making sixteen ounces of fluid extract.

Dose, from one to two fluid drams.

FLUID EXTRACT OF FROSTWORT.

(*Helianthemum Canadense.*)

This plant is familiarly known as rock rose, frost weed, frost plant, and as cistus canadense—possessing tonic, astringent and alterative properties. It has acquired reputation as a remedy in scrofula, some well-marked cases having been cured by it. In secondary syphilis, either alone or in combination with other alteratives, as corydalis and stillingia, or compound sarsaparilla, or alternated with hydriodate of potassa, it has been used with much satisfaction by the profession; and mention is made of its beneficial effects in scrofulous opthalmia and in some cutaneous diseases.

A fluid extract is prepared as follows:—

℞.—Frostwort,	16 ounces.
Diluted alcohol, of sp. gr. 889,	q. s.
White sugar,	2 ounces.

Reduce the plant to a coarse powder, moisten with alcohol of above sp. gr., and then pack in a displacer, and cover with diluted alcohol as directed. Allow it to remain forty-eight hours, then displace with diluted alcohol of strength directed until exhausted; reserve twelve ounces of first runnings, evaporate six fluid ounces, add the sugar, and continue the evaporation to four ounces; then mix with the reserved, and strain or allow it to settle.

The dose is from one to two *fluid drams.*

FORMULÆ FOR PILE OINTMENT.

Furnished by Dr. J. C. Gray, of Mount Vernon, Jefferson Co., Ill

The following formula I have used in my practice for nearly twenty years, with the most satisfactory results. You are at liberty to publish them if you see proper, viz:—

℞.—Carbonas plumbi, pulv,	℥ss.
Pulv. opii,	ʒj.
Ungt. stramonium,	℥j.

The ingredients should be well incorporated.

Apply three or four times a day; the parts should be thoroughly cleansed with warm water before each application. As a local remedy I have seldom found it necessary to resort to any other, and in recent cases it has seldom, and as far as I can recollect, never failed to give prompt relief. In cases of long standing, I usually prescribe twenty drops balsam copaiba three or four times a day.

For the last two years I have used the following, instead of the liquid balsam, and which, I think, is decidedly better:—

℞.—Balsam copaiba,	10 grains.
Podophyllin,	1-2 grain.

To be taken two or three times a day—the object being to move the bowels gently each day, the dose should be regulated accordingly.

W. S. LOVE'S OLIVE PLASTER.

℞.—Pix burgundica,	lbj.
Terebinthina,	lbjss.
Styrax, puri.,	℥j.
Galbanum prep.,	℥iv.
Ext. balladonna,	℥iv.
Pix liquida,	℥j.
Pulv. G. opii,	℥ij.
Pulv. capsici,	℥ss.
Tart. ant. et. potas.	ʒij.
Ol. menthæ sat.	℥j.
Ferri subcarbon,	ʒiv.

[*The Druggist.*

PIERLOT'S VALERIANATE OF AMMONIA.

The originator finds, from his experiments, that fresh valerian roots contain about one per cent. of acid. The object of his formula, is to furnish the preparation in a form that may be kept, and that will bear the same relation to the salt that the spirits of mindererus bear to the acetate of ammonia.

℞.—Acid. valerianic hydrat.	3	grammes.
Liquor ammoniæ fortiss,	1	"
Extract valerianæ alcohol,	2	"
Aquæ distillatæ,	94	"
	100	

Dose, for adults, from one to three teaspoonful daily, along with a little sugar water.—*Jour. and Trans. Maryland Col. of Pharmacy.*

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TO RENDER CHLORINE GAS INNOCUOUS.—Prof. Bolley recommends a solution of *anilin* in water, a few drops of which on a handkerchief, and at times applied to the nostrils, will enable a workman to tolerate the action of the chlorine upon the lungs.—*Druggists' Circular.*

Editorial.

AMERICAN MEDICAL ASSOCIATION.—The thirteenth annual meeting of this association will assemble at New Haven, Conn., on the first Tuesday of June, in accordance with the official notice, which has been published and the adjournment of last year. It is understood that many questions will come before this meeting of importance to the medical profession, which will cause an unusually large attendance from each State, and promises to make this the most important that has been held for many years.

As this meeting is to be inaugurated the sectional division of the body for scientific purposes, and a reference of any question to the appropriate section or committee to consider and report. We shall give a synopsis of its proceedings in our next issue. It is suggested by Dr. Reese, to compliment New York by the nomination of Prof. Valentine Mott as the next president, a compliment deserving one who has earned the highest honors the American profession are able to bestow.

BERKSHIRE MEDICAL INSTITUTION.—We ask the attention of the profession to the annual announcement of the Berkshire Medical Institution. This is an old and favorably known institution, under the charge of an able corps of lecturers whose reputation ought to secure to it a full share of patronage. It is situated in the beautiful and healthy village of Pittsfield, Mass., than which no place offers greater inducements to those who desire a more retired and cool residence than the cities afford for the summer months.

HYGIENIC AND LITERARY MAGAZINE.—This is an octavo journal of sixty-four pages, devoted to hygienic, literary and educational instruction, and ought to secure the patronage of the public generally in the Southern latitude. It is well conducted, replete with interesting matter, its several departments being in charge of persons of professional and literary reputation—Dr. Taliaferro, the hygienic; Mrs. Dr. Riley, the literary, and Mr. Malsby, the educational. Every enterprise of a new journal is subject to the lights and shadows of all business enterprises, and the remarks we herewith quote from the April number are equally applicable to all sections of the country, and are the experience, we doubt not, of many a journalist:—

> "The great cause of so many enterprises going down is simply for the want of support. Resolution after resolution is passed by enthusiastic communities, advocating home enterprises, independent trade, Southern institutions, and making a great harangue about building up facilities in our midst; but when the agent or editor of a Southern enterprise presents his claims to their patronage, and asks support, their enthusiasm becomes mild, their zeal is very *prudent*, their boisterousness, like the calming eruptions of Vesuvius, subsides to the gentle murmurs, somewhat resembling a language of this kind: 'I love to see such things going on; I hope you will succeed; we have been dependent long enough; the South ought to come to your help—*but I don't feel inclined to take the work just now;* my expenses are *rather* heavy this year; perhaps I may remember your journal the next year.' And the individual walks away, to curse and abuse Northern institutions, abolitionists, and everything north of Mason & Dixon's line—but sits for hours reading, pouring over the pages of some New York, Boston, Philadelphia, or London papers or magazines, while you and your enterprise may go to the ——, Tom Walker, or some where else. We have no comment to make upon such persons or their patriotism."

PROF. W. F. WESTMORELAND'S NEW INSTRUMENT.—At the recent meeting of the Medical Association of Georgia, Dr. W. F. Westmoreland, Professor of Surgery in the Atlanta Medical College, presented a new *urethrotome*, of his own invention, intended specially for the section of strictures of the urethra, without the necessity of dilation. There are many cases of this character, which proves exceedingly difficult to manage, and indeed are among the most annoying to the sufferer, as well as to the surgeon. With this instrument the section can be successfully and safely made in cases where the No. 1 bougie cannot be passed. The advantage claimed for this instrument, in its construction, is a small director, which may be introduced through any stricture that is not absolutely impenetrable· This instrument has already been practically and successfully tested in Prof. Westmoreland's hands, and a report of cases and cut of the instrument will shortly appear in this journal. In the meantime, should any gentleman desire to obtain the instrument, it can be had of Tiemann, New York city, the manufacturer.—*Atlanta Med. and Surg. Jour.*

GEORGIA MEDICAL AND SURGICAL ENCYCLOPEDIA.—This is the title of a new journal, just issued at Sandersville, Ga., at $2 a year, and edited by Drs. Hollifield and Newsome, the first number of which we have received. Its general appearance and execution is equal to any of our exchanges, while its original and selected matter are of a character to commend it to the favorable consideration of the profession; and from what we know of the gentlemen who have it in charge, we have no doubt they will make it all they intend—a "repository worthy of the support of the man of taste and information."

MIDDLE GEORGIA MEDICAL COLLEGE.—We have received the announcement of this institution, recently organized at Griffin, Ga. This is the fourth medical college regularly conducted in Georgia. For particulars, see announcement.

UVA URSI.—Mr. Cyrus Hendricks, Jr., of Litchfield Corners, Me., writes to us as follows:—"I have employed uva ursi six times in lingering labor and abortion, with good effect. I used one ounce of uva ursi to one pint of boiling water, giving half an ounce every fifteen minutes."

DIAGRAM OF THE ECLIPSE OF THE SUN, JULY 18.—Prof. Asa Smith has issued a chart or diagram, giving a correct representation of the eclipse of the sun, which is to take place on the 18th of July. The following is the explanation of the diagram, as given by Prof. Smith:—

> "This diagram is a correct representation of the eclipse of the sun which will take place on the 18th of July, 1860, as seen from all parts of the United States and Canada, as it will appear at the time of its greatest obscuration, except that the sun will be less eclipsed at all places south of the parallel of latitude of the city of New York, and the eclipse will be greater at all places north of this parallel than is represented in this diagram—hence, at Philadelphia, Washington, Pittsburgh, Columbus, Indianapolis, Springfield (Ill.), and St. Louis, the eclipse will be a little less than here represented; but at Boston, Portland, Concord, Montpelier, Hartford, New Haven, Albany, Rochester, Buffalo, Chicago, &c., it will be more eclipsed than is represented in the diagram."

A copy would be sent to any address, by enclosing one dime and a three cent piece to Asa Smith, Post Office, station E, Eighth avenue, New York.

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Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER VII.

EUPATORIUM PERFOLIATUM. (L.)

(*Thoroughwort—Boneset—Feverwort, &c.*) Natural Order, *Compositæ;* Linnean System, *Syngenesia.*

THE order *Asteraceæ* of Lindley (compositæ) is one of the most extensive, as well as natural, families of the vegetable kingdom; easily recognized by its syngenesious stamens and capitate flowers. It includes not less than one-tenth of the entire vegetable kingdom—made up of shrubs, or herbs, rarely of trees, and found in all parts of the world. De Candolle describes 8,523 plants of this order—of which 1,229 were annuals, 2,443 biennials, 2,491 perennials, 2,264 suffruticose, 366 shrubs, 72 small trees, 4 large trees, 81 woody plants, 126 climbers; and of 1,201 little is known. Of these, 3,590 were discovered in America, 2,224 in Africa, 1,827 in Asia, 1,042 in Europe, and 349 in the South Sea islands—constituting from one-half to one-sixteenth of the vegetable kingdom, as found in different countries.

According to Lindley, there is a bitterness peculiar to all compositæ, and in the *corymbiferæ*—one of the three divisions of the order—it is combined with a resinous principle. Where this latter is united to a bitter principle, we find the plant possessing tonic, stomachic and febrifugal qualities, as in tussilago, tansy, burdock, May-weed, chamomile, elecampane, golden rod, matricaria parthenium, eupatorium, &c. The stimulating properties are augmented in proportion as the resinous principle is increased. Some become anthelmintics, as artemisia, veronia, tansy and santolina; others emmenagogues, as matricaria, achillea and artemisia. Some have decided diaphoretic properties, as eupatorium, achillea, arnica, artemisia, solidago and calendula; others are very useful as diuretics, as erigeron, liatris; and some are both diaphoretic and diuretic. Some are characterized by intense bitterness, while the unexpanded leaves or receptacles of some species are used as wholesome articles of food, as the artichoke, &c. The cichoraceæ, another division of this order, have usually a milky, bitter, astringent and narcotic juice, as in succory, endive, common lettuce, lactuca virosa, tragapagon (salsafy), leontodon, cardamus, bellis, &c.

The eupatorium is a very extensive genus, abounding especially in North America. We have at least sixteen species in the Northern States, and probably as many more in other parts of the Union. The plant is well known from its simple or rarely divided leaves, opposite, or sometimes alternate or verticillate; flowers generally in corymbs, of a purple, white or blue color. The leaves are often covered with resinous dots. The stem of the *E. perfoliatum* is villous, hirsute, cylindrical; the leaves opposite, connate, perfoliate, oblong, tapering, acute, serrate, rough above, tomentose beneath; heads about ten-flowered. The root is perennial, horizontal, crooked, sending up many erect stems. which are simple at base, branched above, round, hairy, and of a grayish-green color. The plant, however, is too well known to need further description. Botanists describe several varieties of the plant, distinguished by greater or less pubescence of the leaves, and one in which the leaves are ternate. The boneset abounds in low marshy grounds throughout the United States—flowering in August, and continuing in blossom till October. The whole plant is officinal.

Physical Properties and Chemical Composition.—The whole plant is intensely bitter, having a peculiar flavor, but without astringency or acrimony. The odor is but slight, and it yields its sensible and medicinal properties to water and alcohol. The medicinal constituents of this plant have never been accurately known till the recent analysis in your laboratory. It was supposed to possess a bitter proximate principle, which was imparted to water and alcohol, and, also from its odor, a small amount of volatile oil. Your analysis gives of—

		Per Cent.
Organic Matters, - - - -	6329.28	90.418
Inorganic " - - - -	670.72	9.582
Total, - - - - -	7000.00	100.000

		Per Cent.
Albumen, - - - - - - -	163.36	2.333
Gum, - - - - - - - - -	340.00	4.857
Starch, - - - - - - - -	650.08	9.286
Extractive, - - - - - - -	321.12	4.587
Coloring Matter, - - - - - -	276.00	3.942
Bitter Principle, - - - - - -	336.00	4.800
Sugar, - - - - - - - -	84.64	1.209
Chlorophylle, - - - - - - -	617.44	8.820
Black Resin, - - - - - -	247.52	3.536
Soluble Salts, - - - - - - -	523.52	7.478
Insoluble " - - - - - -	147.20	2.104
Lignin, - - - - - - - - -	3263.12	47.048
Total, - - - - - - -	7000.00	100.000

The large amount of resinous and bitter principles in the plant is worthy of particular note, while no volatile oil or tannin is detected in it. Bigelow, however, supposed it contained some astringent matter, inasmuch as a slight precipitate was produced from its tincture, by adding a solution of isinglass; and Eberle states that the decoction forms copious precipitates with muriate of tin, nitrate of mercury, nitrate of silver, and acetate of lead. Experiments have sufficiently demonstrated that the leaves are the most active parts of the plant. From the large quantity of starch and gum contained in the plant, the decoction is very liable to decomposition. Rafinesque states that the eupatorium contains a peculiar brown, bitter, resiniform substance, which he calls *eupatorine*, soluble in water and alcohol, forming salts with the vegetable and mineral acids. It is very probable that the bitter principle of this species is an alkaloid, though it certainly is not easily isolated. M. Righini discovered a peculiar alkaloid in the *eupatorium cannabinum*, in 1828, to which he also gave the name eupatorine, and which he regarded as the active principle of the plant. It presents the form of a white powder—has a taste *sui generis;* is insoluble in water, soluble in sulphuric ether and diluted alcohol. It swells in the fire and burns. It combines with sulphuric acid, and crystallizes in needles. There is good reason to believe that a similar principle exists in several of our native species of the plant.

Therapeutical Properties and Uses.—This plant has a diversity of properties, and will fulfill a variety of indications, according to the dose and mode of exhibition. Thus it is diuretic, diaphoretic, purgative, emetic, expectorant, alterative, and tonic; and either of these effects may ordinarily be produced with great certainty, provided it be given in a suitable manner. In the early history of our country it was very generally used in popular practice, as a domestic remedy, for colds and catarrhal affections, for which it is still a favorite remedy. It was from its great success in relieving the pain attendant upon an epidemic form of influenza that it received the popular title of *boneset*, as the fever accompanying the disease was called *break-bone fever.* The power, however, of relieving pains in the limbs and general muscular system, which belongs to the eupatorium, is not dependent on any specific virtues of the plant, but is common, in a greater or less degree, to all diaphoretics, and especially to the hot infusions of such vegetables as combine a bitter with a resinoid principle, like chamomile, May-weed, golden rod, &c. With regard to the use of this plant in influenza, whether sporadic or epidemic, we have found it possessing great efficacy—relieving the pain of the back and limbs, as well as the general lassitude, with great promptness; for although in this disease the skin is often bathed in persiration, yet it is of a morbid character—the surface being pale and morbidly sensitive, and the excretion of a passive kind. Where the secretions are of this morbid nature, and the pulmonary system is involved, the boneset has proved in our hands a most valuable remedy, inducing a healthy and free perspiratory discharge, and replacing the chilly or febrile sensations with a uniform and healthy glow. In such cases it acts very efficiently as an expectorant, and proves as powerfully remedial as can be expected from any single remedy whatever. Much, indeed, might be said of its influence over the nervous system, and its powers in typhoid pneumonia, and the pulmonary complications of epidemic influenza, particularly among the aged, but we are now more particularly concerned with its tonic properties.

This plant was in general use among the aborigines of this country, on its first discovery, as a remedy for intermittent fever, and was accordingly adopted by the whites for the cure of the same disease. Whether it proved successful or not depended very much on the mode of its administration. Sometimes it would arrest the disease, if freely given in warm decoction, just before the expected recurrence of the paroxsym, proving emetic or emetico-cathartic; and in other cases it would prove successful if given in cold decoction or the powdered plant, at frequent intervals between the paroxysms; but in a majority of cases it failed to subdue the disease, and since the introduction of quinine it has been almost wholly set aside by the regular practitioner in the treatment of malarial fevers, except as an emetic and diaphoretic.* In the year 1812, thorough trial was made with this remedy in the treatment of intermittents, in the New York Almshouse, it being substituted for the Peruvian bark, which was then used in substance, and, it is stated, with uniform success. The cases, however, must have been of a very mild form. The same authority (Dr. Anderson) states that it was also extensively employed about that time, in the public institutions of New York, in remittent and yellow fever, in typhus pneumonia, catarrhal fevers, several cutaneous affections, in dropsies, and for the removal of mere debility; and by properly regulating the administration of the medicine, he remarks, that it fulfilled successfully all these indications, and exerted a decided curative effect. Drs. Bard and Hosack thought very favorably of the boneset as a diaphoretic, and were in the habit of frequently prescribing it in the above affections, but generally as auxiliary to more powerful remedies. Its power as an anti-periodic is comparatively feeble; but the cold infusion will answer all the purposes of the bitter tonics. As it has but slight influence in augmenting the action of the heart and arteries, it may be employed with advantage in almost every variety of inflammatory action. In the atonic forms of dyspepsia and general debility it is relied on by many practitioners as an efficient remedy; many think, however, that it is more apt to cause irritation of the stomach than quassia, gentian, or colombo. This might be expected from the large amount of resinous matter contained in it. In that form of indigestion consequent on the use of alcoholic drinks, it has proved highly beneficial, as well as that of old people—giving tone to the digestive organs, invigorating the assimilating functions, while it restores the skin to a healthy condition. Its laxative properties also, combined with its tonic power, renders it well suited to such cases. Its alterative properties, which have recommended it in certain cutaneous affections, are solely dependent on its tonic power, and are by no means strongly marked. Its efficacy in certain forms of dropsy has been dwelt upon by some writers; at present it is rarely used in this disease, other more active medicines having superseded it. As it tends to invigorate the functions generally, it would be strange, indeed, if it had no curative power in such affections. The eupatorium has been extolled in a variety of affections as a tonic alterative, and doubtless it possesses qualities which entitle it to consideration. Dr. Thacher, who had tried it extensively in various diseases, says that in anasarcous swellings of the extremities, depending on general debility, the alcoholic tincture of the plant may be safely recommended as an excellent tonic. Dr. Burgon, of Pennsylvania, praises it very highly in cases of anorexia consequent to drunkenness. "In such cases," he says, "I have used a cold infusion with evident benefit, and I prefer it to any article I have hitherto employed; it very speedily restores the tone of the stomach, and no unpleasant effects follow its administration." Dr. Bigelow speaks highly of its good effects as a tonic in loss of appetite and other dyspeptic symptoms, as well as in general debility. Dr. Eberle states that he has found it particularly useful in very old people laboring under indigestion; that it gives tone to the stomach, and renders the skin soft and comfortable. He also praises it as an excellent substitute for chamomile tea, to promote the operation of an emetic. We have seen excellent effects from the cold infusion of this plant, taken as a prophylactic, in malarious districts, against fever and ague; also as a stomachic tonic, in the form of tincture. Dr. Zollickoffer thinks there is no indigenous vegetable production of the United States that is more deserving the attention of physicians than this; that it possesses medicinal virtues which are admirably adapted to a variety of affections, and that in conjunction with sup. tart. potassa it is one of the most valuable and efficient remedies in *tinea capitis.* Rafinesque states that it appears to be superior to chamomile as a sudorific tonic, and preferable to cinchona in the treatment of the local autumnal fevers of the country, and that he has seen them cured by it when other tonic remedies failed. This writer also says that no other tonic of equal activity can be exhibited in fevers with less danger of increasing excitement or producing congestion, the only objection to its use being its nauseous and disagreeable taste, but that this may be obviated by combining it with aromatics. This last suggestion we have found a valuable one, and especially where there is any gastric irritability present.

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* The native bitters which have been most extensively used in this country for the cure of intermittents are the bark of the *cornus florida*, or dog-wood; *liriodendron tulipefera*, tulip tree; *cerasus serotina*, wild cherry; *sabbatia angularis*, American centaury, and the *eupatorium perfoliatum*. In regard to these substances it cannot be doubted that they have all proved more or less successful, but generally after the disease has continued for some time, and kept up partly by habit and partly by debility. Dr. Drake thinks that the best time for using them is the period of restoration after the paroxysms have been interrupted by other means. Of these, the cornus undoubtedly ranks first as an anti-periodic, although the testimony in favor of the eupatorium is much fuller, as this writer remarks, than that bearing on the dogwood. In travelling through the West, we have found many physicians who placed great reliance on it in intermittents, using it in the form of the saturated tincture, in dram doses every hour between the paroxysms. Dr. Drake thinks it probable, from the accounts he received from Western and Southern physicians, that the plant contains a peculiar principle, resembling quinine in its effects upon the body. We fully agree with this writer that in a country of such vast extent as ours, many parts of which, from their topographical structure, must forever remain subject to intermittent fever, it should be regarded as a duty of patriotism and humanity to test, by exhibition and analysis, such of our indigenous plants as, in their sensible qualities, bear any resemblance to the cinchona. He who should discover in our country a substitute for the bark would be honored as a public benefactor.

Preparations.—Fluid extract, solid extract, eupatorin, eupurpurin, pills, tincture, infusion, compound infusion, syrup, powder.

The *fluid extract* is the best preparation for general use as a tonic and tonic alterative, in doses of from one to two drams. It is concentrated, and combines all the remedial virtues of the plant, and in a form easily administered to children. It should be given in a diluted state, and may be flavored with any of the aromatic essences.

The *solid extract* is a good form when it is expedient to combine other substances with it, as blue mass, calomel, ipecac, henbane, &c. Dose, five to twenty grains.

The *eupatorin*, the bitter alkaloid extract, is an admirable form in intermittents, and also in atonic dyspepsia and general debility, and may be given in pill or powder, and in such combinations as are desirable.

The *eupurpurin*, which is a union of the bitter extractive (eupatorin) and the resinous principle, is more stimulating than the former, and is best adapted for alterative purposes. The dose is from three to four grains.

The *infusion*, made with an ounce of boneset to a pint of boiling water, is, in many cases, a very eligible preparation, in a dose of one or two fluid ounces at suitable intervals. In chronic cases, where a tonico-alterative effect is desired, it should be given cold every six hours, but as an anti-periodic in intermittents the dose should be repeated at least every two hours. As a diaphoretic, the warm infusion is to be drank pretty freely—in some cases to the point of emesis, and afterwards often enough to keep up a free perspiration. Six or eight ounces will be required of a strong infusion to produce free vomiting; half this quantity generally proves cathartic.

The *decoction* is prepared by boiling one ounce of the plant in a pint and a half of water down to a pint, of which a wine-glassful usually operates as an emetic and cathartic.

A *compound infusion*, very useful in hectic and other cases, may be prepared by taking of boneset and sage, each half an ounce; cascarilla, one dram; boiling water, one pint and a half. Infuse till cold, and strain. A wine-glassful every three or four hours. Or, the compound infusion may be prepared by mixing together six ounces of the fluid extract with one dram of fluid extract of cascarilla. Dose, two to three ounces.

A *syrup* of this plant is best made by adding four ounces of the fluid extract to ten ounces of simple syrup, of which a suitable dose would be from two to four drams. This is well suited to pulmonic affections in old people, and also to typhoid pneumonia. The *powder* is the most objectionable form of all. It is usually given in doses of twenty to thirty grains, or more; but it is seldom recommended in this form.

The following compound has recently been recommended in renal affections, and it is said with very satisfactory results:—Eupurpurin, two scruples; xanthoxylin, one scruple; strychnia, one grain. Divide into twenty powders. Dose: one, three, or four times a day, in suppression of the urine, torpor or paralysis of the kidneys or bladder, rheumatism, hepatic torpor, &c.

Other Species.—We have at least sixteen species of eupatorium growing in the Northern and Middle States, of which several are known to possess medicinal properties equal to the *E. perfoliatum.* Of these, the

Eupatoreum purpureum, or *gravel plant*, is one of the best known, and perhaps most generally employed. The plant has purple flowers, and, like the former, grows in swamps and other low grounds, from Canada to Virginia, and flowers in August and September. The root is the part employed in medicine—having a bitter, aromatic and astringent taste. It operates on the kidneys and urinary organs generally, and has considerable reputation in gravelly affections. It is said to be more effectual in the removal of uric acid deposits than of other calculous formations. It has been successfully employed in chronic cystitis and urethritis, and in atonic conditions of the genito-urinary organs generally. It is believed, by those who have made it the subject of experiment, to promote renal depuration, while it exerts a decided curative action in hæmaturia and strangury. In dropsy, also, it has considerable reputation, especially among the eclectics, who suppose that in addition to its diuretic properties it stimulates the absorbent vessels. They also place great reliance upon it in dysentery, hæmoptysis, hæmatemesis, and other hemorrhages—giving it in doses of two to five grains every hour or two, according to circumstances. As an expectorant in asthma, catarrh, whooping cough, influenza, bronchitis, and other pulmonary affections, this plant has long been celebrated. The preparations are the same as those of the last species.

Eupatoreum Teucrifolium—(Willdenow)—*Wild Horehound.*—This indigenous perennial has an herbaceous stem, with ovate, acute, scabrous leaves, and small white flowers, and grows in low, wet places, from New England to Florida—flowering from

August to November. The whole plant is employed. Its sensible properties are very similar to those of the *E. perfoliatum*, though considerably less bitter and disagreeable. It is aperient, diuretic, tonic and diaphoretic, and is in very general use at the South in the treatment of intermittent and remittent fevers. According to Dr. Jones, of Georgia, it is a good substitute for quinine in malarious diseases, being tonic, diaphoretic, diuretic, and slightly cathartic. He recommends four ounces of the infusion, made with an ounce of the dried leaves to a pint of water, every four or six hours, between the paroxysms. (*See Coxe's Am. Dis.*, p. 7.)

The *E. ageritoides* (*white snake-root*), and the *E. aromaticum*, possess medicinal properties, entitling them to greater attention than they have yet received from the profession.

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Atropa Belladonna.

(BELLADONNA—DEADLY NIGHTSHADE.)

[*Continued.*]

BELLADONNA is a poisonous plant, all whose parts exhale a disagreeable, nauseous odor. The berries are the most dangerous part, because of the fatal mistakes they are likely to cause. In truth, in their maturity, they bear a strong resemblance to small cherries, and both children and adults have not infrequently fallen victims to the mistake. We can conceive how such accidents have occurred, since the fruit when fully ripe has a sweetish taste—insipid, it is true, but no way disagreeable. Two remarkable instances of poisoning by Belladonna are on record: that of forty children of Pitié, who were poisoned by eating the berries in the garden of the king, in 1773; the other, that of a hundred and fifty soldiers who became victims of a similar mistake. However, it appears to be conceded that death does not ensue unless the berries are eaten in large quantities.

But the fruit is not the only poisonous part of the plant—the root is justly considered the most active portion. The results of chemical investigation come to the support of this opinion; for it has been shown that in a given quantity of the root with an equal amount of the fruit, the former contains a greater proportion of atropine than the latter.

The extensive use that has been made of Belladonna in therapeutics, and the many mistakes that have occurred by its administration, have given frequent occasion and opportunity to study the physiological and toxical effects of the plant, and its preparations on man. In a small quantity, on whatever organic surface it may be applied—on the skin surrounding the orbit of the eye, on the conjunctiva, on a blistered surface, or introduced into the stomach—Belladonna produces dilatation of the pupil, an effect which can take place without derangement of the regular functions. As Christison has remarked, in his "Treatise on Poisons," the dilatation which is produced by the application of Belladonna to the surroundings of the eye, is not often accompanied by trouble in the vision. This experience is confirmed by numerous observers, but yet the sight is usually obscured when the agent, introduced internally, has brought about the dilatation, sometimes even to complete blindness. This effect on the eyes may continue one, two, or three days, and even longer. Contrary to the assertion of some physiologists, it has been maintained that Belladonna acts only on the eye to which it has been applied. Perhaps this effect on the single eye, which demonstates, besides, its direct action, takes place only when a small quantity has been employed, and sufficient has not been absorbed to effect both eyes at the ame time.

In a larger dose it produces constant dilatation of the pupils, nausea, vertigos, and even delirium, which sometimes lasts from twelve to twenty-four hours, without any alarming symptoms. This latter has sometimes been observed when, given with a therapeutic intent, the medicinal dose has been too high at the outset, or when it has been too quickly excluded, and, in certain cases, from the simple effect of the individual susceptibility. Lastly, we should not pass by its effect upon the bladder, which, in some cases, is partially paralyzed.

The effects that Belladonna produces, when taken in poisonous doses, vary not only with individuals, but according to circumstances—such as the quantity introduced into the animal economy, the way in which it is introduced, the remedies employed in combating. After many observed cases, however, the symptoms which are manifested are the following:—Nausea, which is not always followed by vomiting; dryness of the mouth; constriction of the fauces; derangement of the head; headache, vertigos, extreme dilatation and immobility of the pupils, commonly confusion of vision, and sometimes complete blindness, to the extent that the eye is insensible to the most glaring light; tumefaction and redness of the face; globe of the eye injected and prominent; a fixed, dull, or haggard gaze, sometimes spirited and furious; hallucinations—at first, a light delirium, then more intense, ordinarily gay or marked by extravagances; numerous and ridiculous gesticulations; immoderate laughing and an inexhaustible loquacity; in some cases speechlessness, or a painful articulation of confused sounds. There is a case reported where a true state of somnambulism was produced: the patient was insensible for twenty-four hours to all external objects, yet occupied himself in going through all the motions incident to his trade as a tailor; and later, he had hallucinations, speaking as if he was keeping up a conversation with an interlocutor.

Very rarely partial or general convulsions succeed. Merricks has given the case of a child, where there was a convulsive state of the jaw, of the muscles of the face and extremities, and afterwards rigidity of the spine. With the tailor referred to above, the state of somnambulism was preceded by a tetanic rigidity for some moments. More generally, however, there is weakness, syncope, prostration, sometimes alternating with agitation or spasms, sometimes only delirium.

The other phenomena observed in poisoning by Belladonna are less important, and do not exist in the same degree—as dryness and heat of the fauces, which most always are observed, and which sometimes seem to extend to the stomach; difficulty, and well-nigh impossibility of swallowing; thirst, profuse sweats, and heat of the skin.

Notwithstanding the severity of the symptoms, poisoning by Belladonna is seldom fatal. The symptoms, after lasting one, two or three days, disappear, succeeded or not (as the case may be) by a light febrile condition, the patients often not remembering what has passed.

In some cases the blindness lasts after the cessation of all trouble of the cerebral functions, but in general the dilatation of the pupils does not dissipate for a long time after the other symptoms have vanished, which, indeed, the nervous symptoms, such as vertigos, tremblings, and trouble in the vision, and may last during three or four weeks.

The treatment of poisoning by Belladonna differs in no respect from that made use of in poisoning by other stupefying substances. They are emetic and purgative injections where there is a chance to evacuate part of the poison. Administration of subacids, strong coffee, and frictions to the lower extremities to overcome the stupor; cold or tepid baths against the agitation or delirium, general or local bleeding when congestion in the head is threatened. In general, the symptoms are diminished when the constipation is overcome; this is the reason for insisting on the laxative and saline injections.

Colchicum Autumnale.

By Joseph Bates, M. D.

Few, indeed, are the medicinal agents that are of more importance to the physician in the daily practice of his profession than Colchicum.

The history of our most valuable medicines is replete with glaring absurdities and contradictions. They have been regarded at certain periods as incomparable blessings to the human family. At no distant epoch you will find all confidence lost in their employment, and regarded not only as worthless and uncertain, but even as prejudicial in the very diseases for which they had the reputation of specifics. Among the numerous medical agents that at times have been lauded to the skies, and again trodden under foot as worse than useless; that have gained an imperishable notoriety in successfully combating with disease amid conflicting testimony of friends and foes, Colchicum occupies a conspicuous position. I have used it more or less freely, during twenty years, in the treatment of diseases, such as rheumatism, acute as well as chronic; gout, neuralgia, chorea, morbid conditions of the kidneys, torpid liver, constipation of the bowels, dropsy, and in some cutaneous affections, &c., and generally with the happiest results—never, to my knowledge, being in a single instance prejudicial to my patients. Colchicum is a valuable deobstruent, and for certain conditions of the system the most active diuretic. Perhaps physicians as often fail in the management of their medicines as in the selection of their agents. Some administer quite too small doses, and witness but little or no result, and abandon the use of the medicine; others give too large, and become alarmed and give up its use, and proclaim the article as dangerous. In rheumatic patients of plethoric habits I begin with ten drops of tincture of Colchicum, repeated every four hours, until I get foaming or frothy dejections from the bowels; increasing or diminishing the dose according to the susceptibility of the patient. For constipation, I give eight drops every four hours, and continue its use a few days, adding or diminishing the dose as circumstances may indicate. Dr. Robert Dick says:—"Colchicum acts decidedly on the liver, removing torpid states of that organ, and causing yellow or even dark stools to succeed gray or white ones." In France, he says, "it is ranked among diuretics." He regards its use as highly beneficial in gout, rheumatism, neuralgia, and in certain diseases of the kidneys.

Dr. J. M. Maclagan, of Edinburgh, prescribes Colchicum in dropsy succeeding scarlatina. He says:—"At all events, when ascites or anasarca are present in Bright's disease as inter-current affections, the use of Colchicum, both as a cathartic and diuretic, seems to me to be indicated. In those cases where coma supervenes from accumulation of urea in the blood, he remarks:—"Colchicum will prove of eminent service." He says the power which has been shown that Colchicum possesses of replacing the urea in natural, and often superabundant amount in the urine, seems to point it out as a useful remedy in dropsy succeeding scarlatina. He instances its use where the urine was totally suppressed, and symptoms of coma present, with complete success. He uses it successfully in acute rheumatism. He remarks that large doses are not requisite—twenty minims of the tincture or the wine may be given every six hours until some relief is obtained; or a grain of the inspissated juice or of the acetic extract every four hours. Under this treatment, he remarks:—"The disease sometimes vanishes within three or four days, the medicine producing sickness and purging, and the rheumatism or rheumatic gout rapidly declining. Occasionally the same favorable events take place, although there has been no disturbance of the stomach or bowels. Dr. Maclagan speaks of its utility in urticaria. He quotes cases where the uric acid contained in the urine of patients taking Colchicum was nearly doubled in the space of twelve days.

Dr. Elliotson gives the case of a man laboring under prurigo, in its most inveterate form, to whom half-dram doses of wine of Colchicum were administered thrice daily. This the patient took for three weeks, at the end of which time he was completely cured. He adds:—"Colchicum would thus seem to answer well in some cases of skin diseases, where the urine is of low specific gravity."

Dr. Bennett, of Edinburgh, cites interesting cases of delirium and coma concomitant upon scarlatina treated with Colchicum. He closes his communication with this remark: "Colchicum seems to me worthy of more extensive trial," &c.

Dr. Joseph Bell, physician to the Glasgow Royal Infirmary, in the treatment of rheumatism, says:—"When the urinary secretions are scanty I prescribe Colchicum."

George Fife, M. D., remarks:—"Colchicum, of all the means internally applied for the cure of neuralgia, deserves the most confidence." He adds:—"The advantages of this medicine in neuralgia seem, if possible, to be greater than those which it possesses in gout and rheumatism." He continues:—"I can safely affirm that, so far as my experience of Colchicum extends, I regard all other means as secondary or auxiliary to it in the treatment of neuralgia, gout, or rheumatism." "In my practice," says he, "which now extends over a considerable period, and during which many cases of gout have been treated, I can call to mind no case in which the Colchicum has been injurious, or followed by unpleasant effects; which may also be said of its exhibition in rheumatism." Dr. Chapman says "that from ten drops of the radical tincture of Colchicum, repeated several times in the twenty-four hours, and persisted in for some time, as much may be anticipated, with a view merely to the restoration of the lost susceptibility of the bowels, as from anything else within my experience; rarely, indeed, having seen it fail."

There are very few articles in the list of medicinal agents capable of meeting a greater variety of symptoms, or of fulfilling a greater number of indications, than Colchicum. There are few medicinal agents capable of accomplishing so great an amount of good, if properly managed, and few that do more mischief when imprudently administered. A person should be well acquainted with the variety of its operations in order to administer it with success. I use it very freely in a variety of diseases, and have never witnessed the least unfavorable result. Were its effects upon disease better and more generally known, we should have less conflicting statements from writers upon this article. In the next number I purpose to pursue this article, and allude to a greater variety of diseases in which it might be given, &c.

In relating my own experience with Colchicum, I could do no better than to quote the experience of eminent physicians, with whom I most cheerfully accord.

Aconitum Napellus.

(ACONITE.)

By Philander Stewart, M. D., of Peekskill, N. Y.

This plant grows in the mountainous forests and in the plains of France, Germany and Switzerland. It has an erect, round stem, which grows to the height of from two to four feet, and bears on its summit a large and very beautiful raceme of flowers of a dark violet-blue color. In its cultivated state, however, the color and size of its flowers are said to vary very much. It is much prized in England and this country as an ornament to the garden, and is cultivated for that purpose. It flowers in May or June.

Medical Properties.—It is mentioned by Ovid and Pliny as having been extensively used by the ancients as a poison to destroy criminals. It was also used to destroy wolves, and hence one of its names—*wolf's bane.* The whole plant is said to be medicinal, but the root is the strongest. According to Dr. Fleming, who, says Dr. Christison, has made the ablest investigation into its effects that has yet been undertaken, the following practical inferences may be drawn from its effects on the cerebro-spinal and muscular systems:—

1st. It is sedative, anodyne and anti-spasmodic.

2d. It is an admirable antiphlogistic in apoplexy, phrenitis, or in any disease in which the circulation of the brain is excited.

3d. It is contra-indicated in headache arising from anæmia, and wherever there is a torpor or paralytic condition of the muscular system.

From its action on the circulation, he infers—

1st. That it is a powerful antiphlogistic.

2d. It is calculated to be of great value in all cases where there is inordinate activity in the circulation.

3d. It is contra-indicated where there is an obvious mechanical impediment to the passage of the blood.

4th. It is contra-indicated where there is irritability of circulation with great diminution of power.

Its effects on the respiratory system led him to infer—

1st. That it would be highly useful in pneumonia, pleuritis, &c.

2d. In spasmodic asthma.

It is contra-indicated in difficult breathing arising from any other cause than inflammation and spasm. In the advanced stage of bronchitis, with excess of secretion, it would be injurious by diminishing the power of expectoration.

In acute rheumatism it is a valuable remedy given in conjunction with vin. colch. sem., in the dose of five minims of the former to a half dram of the latter. It is almost my main reliance in that disease. In the inflammatory stage of croup, with tart. ant. et potass. or ipecacuanha, it is highly useful. In hæmoptysis attended with excessive force in the circulation it is one of our best remedies. I am acquainted with a highly intelligent gentleman of the legal profession who is subject to hemorrhage from the lungs, and who assures me he can now prevent an attack at any time by taking four drops of the officinal tincture. He is so susceptible to its influence that that dose will reduce his pulse in one hour from 120 down to seventy per minute.

In over-doses it occasions violent nausea, vomiting, hypercatharsis, vertigo, cold sweats, mania, convulsions and death.

St. Ignatius Bean.

(STRYCHNOS IGNATIA—IGNATIA AMARA.)

THE highest order of scientific classification is that founded on a complete knowledge of the objects to be classified, taking into account properties and relations equally, at least, with the more evident circumstances of form and development. The object of classifying is to aid investigation and afford the best possible means for grasping the whole of a subject; in short, to construct a "royal road to learning." A complete classification of the vegetable kingdom would include, in addition to what it now does, an arrangement according to the medical properties of the individual plants, else we must conclude that their chemical construction is wholly independent of the agencies that are at work in their growth and development, as well as independent of the materials out of which they are composed, which is a statement of an impossible proposition, inasmuch as chemical analysis but separates the materials one from the other, while the therapeutic qualities of a plant are wholly due to the active properties of some one or more of these materials, free or in combination. This law of correct classification has been thus stated:—"Vegetables owe their medicinal qualities to the immediate materials which compose them. Vegetables of the same family contain, generally, the same materials or immediate principles. The characteristic medicinal property is mainly owing to one of the body. The intensity of this property is proportional to the quantity of the principle which determines it, and if this principle is wanting in a species the characteristic medicinal property of the family fails with it."

Finely illustrative of this general principle is the genus strychnos. In four of the species—the tieute, nux vomica, ignatia and colubrina—there exists the same active principles which, as experiment has determined it, acts similarly on the vegetable and animal tissues. The tieute is the true upas tree of Java, and that with which the Indians poison their arrows. It contains the largest amount of the peculiar active principle of any in the genus. The nux vomica has been received largely into medical practice, and has been subjected to careful and extensive experiment and chemical analysis, while the ignatia and colubrina are as yet comparatively little known, save as powerful agents abounding in strychnia.

The ignatia, named by the Jesuits in honor of the founder of their order, is a native of Cochin China, the Philippine Islands, and other parts of Asia, and has been for a long time employed in these sections in numerous diseases. It is the opinion of Pareira that the nux vomica of Serapion was the St. Ignatius bean; however, the seeds came into the Dutch shops, according to Alston, about the latter end of the seventeenth century, and there is reason to suspect they were known long before this.

To MM. Pelletier and Caventou is due the first careful analysis of the ignatia, which is published, at considerable length, in the tenth volume of the *Annales de Chemie et Physique.* Say they:—"We have obtained from the ignatia strychnine under a crystalline form, perfectly white, and with all the characteristics of a pure substance, endowed with the distinctive and characteristic properties of salifiable bases—that is, with the faculty of uniting with acids, of saturating them, and of forming with them true neutral salts, soluble, transparent and crystallizable. Encouraged by this success, we undertook the analysis of the nux vomica, and immediately recognized in this material the precise alkaline principle of the St. Ignatius bean. In the nux vomica it constitutes, by its combination with an acid and mixture with a coloring matter, the yellow, bitter principle that has been described. The alkaline principle also exists in a wood known under the name of the *bois de couleuvre,* which naturalists call strychnos colubrina." According to this authority the analysis of the ignatia gives the following:—1st, the igasurate of strychnine; 2d, a little wax; 3d, a concrete oil; 4th, a yellow coloring matter; 5th, gum; 6th, starch; 7th, bassorin; 8th, vegetable fibre. The nux vomica, analyzed by the same process, furnished the same results, though in different proportions. It contains less of the salt of strychnine, but a greater quantity of concrete oil and coloring matter, while the colubrina is charged with fatty matter, contains less of the salt of strychnine, a greater quantity of coloring matter, and the igneous fibre replaces entirely the bassorin and starch. Later analysis have not differed from this, except they incline toward denying the presence of any starch in the ignatia.

As has been said, the action that the nux vomica exercises on the animal economy has been studied with great care, and it has, by farther experiment, been shown that the different substances given by the analysis of the various species of strychnos, after having been carried to the highest degree of purity, and been administered in various doses to many animals, afford the same general results as when obtained from the nux vomica. "The other principles contained in the same vegetables, when in a state of purity, have no action on the animal economy." The salts of strychnine have a more energetic action than the base itself, and this on account of their great solubility in a small quantity of acid.

Experiments upon the inferior animals were made with the ignatia by Pelletier and Caventou, in great numbers and under a variety of conditions, giving precisely similar symptoms, from the first stage till death ensued, as were shown under the influence of the other species of the strychnos, or of the active principle itself. Another extract from this paper will suffice on this head:—"No substance exists capable of forming with strychnine combinations not poisonous; and, consequently, the only means of remedying the effects of strychnine, and the substances which contain it, are those which, acting directly upon the animals, and independently of their chemical action on the poison, tend either to their expulsion as emetics or to weaken the spasmodic movements, the cause of the asphyxia to which the animals yield, or to prevent the asphyxia by surgical treatment and the mechanical means indicated by the physiologists that have been cited." The conclusion is "that that the strychnine, an alkaline and salafiable base, is the active and poisonous principle of strychnos, particularly of the ignatia and nux vomica; that in all its combinations it maintains its properties on the animal economy; that we cannot, perhaps, by therapeutic means remedy the ravages it makes—and it will be in vain to seek for a substance which, as an antidote, will be capable of preventing its effects by neutralizing it."

We shall next inquire, what are the effects of strychnia and its combinations upon the nerves?

The degree of effect varies with the quantity employed, but it seems to be the same in kind, being confined to the ganglionic system of nerves and the spinal cord, extending as high up as the medulla oblongata, and, according to Flourens, influencing the cerebellum, but not directly affecting the cerebrum. Hence in fatal cases the intellect is not disturbed till the extinction of life. The decapitation of animals does not hinder the characteristic effects of this agent, while, on the other hand, the removal of the spinal marrow completly prevents its peculiar agency, even though artificial respiration be maintained. "From some experiments of Segalas, it appears also to exhaust the irritability of the heart; for in animals he found that organ could not be stimulated to contract after death, and life could not be prolonged by artificial breathing. These differ from all narcotic poisons by not destroying the sensibility. During the intervals of the fits the sensibility is, on the contrary, heightened and the faculties acute. (Christian.) M. Magendie having, by a series of experiments, ascertained that the whole family of plants of the strychni amari had the singular property of acting immediately on the spinal marrow without affecting, except indirectly, the functions of the brain, thought they might be advantageously applied to the treatment of disease. He soon put his newly-discovered remedies to the test, and his conjecture, he says, "was verified by numerous experiments made at the bed side." In his "numerous experiments" he discovered some remarkable physiological facts. His attention, in the use of this agent, was mainly directed to paralytic subjects, and he found that it excited convulsions in the paralyzed part before any action was discoverable in the sound parts. In hemiplegia, the sound side would be perfectly quiet, while the paralytic parts would be affected with tetanic shocks and profuse perspiration: while any contact of an external body with a part under the influence of strychnia, which is supplied with nerves originating from the spinal cord, immediately excited convulsive action. Of these two phenomena, Dr. Grainger gives an explanation as follows:—"Strychnia acts by preference on the paralytic limb or limbs, because the cerebral control is removed from the paralyzed limb. If the cord be divided, the pure spinal power remaining, when the skin is touched the limb is retracted, and must be retracted, because the cerebral control is wanting. So when the spinal chord is stimulated by strychnia, it must act on the limb or limbs from which the cerebral power is withdrawn."

These appear to be the results of the investigation on the constitutional effects of the strychnine combinations; we now inquire what classes of diseases come into the range of these agents?

The omni therapeutic properties attributed to the ignatia, in a pamphlet from the pen of a once afflicted but now restored clergyman, gave, very naturally, the impression of a quack advertisement, though the paper called the attention of scientific practitioners, somewhat extensively, to the real virtues of the ignatia. This reverend gentleman presented a most formidable array of diseases which his pills had cured, embracing well nigh the whole nosology of modern times, but the farrago was pardonable from the extremely modest and non-committal form in which it was offered, and as being not the results of his own personal experience, but given on the strength of communications from those "in every class of society" who professed to have been cured by the use of his preparations. While it is unreasonable, with any knowledge of the scope and mode of action of the ignatia, to accept a vast deal of what he gives, as capable of being reduced by this agent, yet we can readily see why it is applicable to a wide range of the symptoms enumerated.

That condition of the body indicated by a great number and variety of symptoms called dyspeptic, is clearly dependent upon weakened and imperfect action in the digestive organs. The organ of the digestive apparatus, in consequence of its direct exposure to so many irritating substances, and its intimate sympathetic communications, is affected with many forms of sub-acute and chronic gastric irritation and inflammation, giving rise to general weakness, uneasiness of body, and a host of distressing sensations, while, at the same time, the moral and intellectual faculties are, in their turn, liable to be affected by these disordered functions. The stomach and duodenum are the most eminent of the digestive organs, and these are connected together, as well as combined with all their congeries appropriated to the perfect elaboration of the nutritive and sustaining principles of the economy, by the ganglionary system of nerves. The stomach is the centre of the digestive apparatus, and owes this character to its intimate union with the great solar plexus—the centre or brain, if it may be so termed, of the ganglionary system, regulating the nutritive functions. It is very clear, therefore, that excesses of any kind, or modes of life, that do not give these organs their appropiate play, or weaken it by over action, and so, in either case, destroying the equilibrium of the functions, must tend, to a greater or less degree, to deaden the action of this entire system of nerves, and the philosophic adaptation of the remedy to the disease is evident in the numerous symptoms, evincing a derangement of the digestive apparatus in the case of persons in the pamphlet referred to, as having been overcome, and the system restored to a healthy tone by the use of the ignatia. It is with some satisfaction that we refer to this catalogue of maladies, in that it is made up of the results of individual experience; and making all allowance for the probable deception in attributing more effects to the cause than it can conveniently produce, we can, after all, trace a true connection between the properties of the ignatia and the status of the constitution it rearranges.

The specific use of the ignatia may be stated thus:—It has a tonic, stimulating effect on all the organs under the influence of the ganglionic system of nerves, by its acting directly upon them, exciting and equalizing their weakened and disturbed action, and consequently restoring to their equilibrium the digestive functions.

The ignatia appears to be used quite indiscriminately in the countries where it is native, though how far, beyond what has been stated, it is useful as a remedial agent, remains to be shown from the experiments of our hospital and other practitioners. The large amount of strychnia in the ignatia calls for great care in administering it, and also for especial attention on the part of the profession towards discovering some available antidote for the poison when taken in the pure alkali or in its combinations. Though among the most painful in its operations of all the poisons, it is swallowed as a luxury by those who are determined to die before their time; and when taken in any considerable dose, it is about impossible to hope for relief to the sufferer from any agent used as counteracting. Olive oil, lard and morphine have been used, as also chlorine, bromine and iodine, in the endeavor to form an insoluble salt with the strychnia; but the absolute necessity of immediate action has given these antidotes only indifferent success. The large and constantly increasing demands for the ignatia, and its consequent use, will undoubtedly soon develope its important properties, and give it a prominent place in our materia medica. So far as it appears, this is a specific agent; and every discovery of such agents, with their applications and limitations, and bringing them universally into practice, is, to that extent, perfecting the science of medicine.

Opiated Colchicum Wine in Rheumatism.

By Dr. Eisenmann.

Dr. Eisenmann, of Würzburg, first states the wide application which he gives to the word "rheumatism," denoting by it every affection which may arise in the healthy system, independently of any specific cause, from exposure to cold. "By exposure to cold, I do not understand merely the effect produced by the contact of cold water or cold and humid air with the external integument, but also that which takes place when cold and damp air penetrates into the lungs, or when cold water is taken into the stomach, the temperature of the body having been raised by exercise." This view is justified by the facts—1, that cold gives rise to the most various affections of the nervous and vascular systems; 2, that these various affections may become, by metastasis, transformed into each other; 3, that they communicate to the economy a marked predisposition to affections of the same nature, such predisposition being increased with each reproduction; 4, and that they yield to the same treatment, whether they show themselves under the form of neuroses or of vascular affections. Under the title of rheumatic inflammation, therefore, the author ranges all inflammatory affections of the heart, lungs, pleura, peritoneum, kidneys, serous membrane of the liver, &c., when these are not due to any specific cause, and treats them in the same manner as acute articular rheumatism.

The means which, beyond all others, he has found of efficacy in the treatment of rheumatism, is a mixture of colchicum and opium, the colchicum acting far more efficaciously when so combined, and then not giving rise to the half-poisonous effects which often attend its use when given alone. Neither the one nor the other substance will produce alone the advantageous effects which result from their union. Dr. Eisenmann speaks not only from his own large experience, but from that of many of his medical friends, among whom "Eisenmann's drops" have acquired a great reputation. These consist of twelve parts of colchicum wine and two of tincture of opium, twenty drops being taken three times a day. Instead of preparing the colchicum wine with sherry, as he formerly did, he now makes it according to the formula of the Prussian Pharmacopœia, which directs 150 parts of the colchicum seeds to be macerated in 770 of alcohol; this preparation being always uniform in strength and more active than the ordinary colchicum wine. Although the above drops succeeds so well in acute rheumatic affections, they are of little or no use in old and chronic cases. This induced the author to try the effect of adding minute doses of corrosive sublimate; and although his trials of this modification have been, as yet, too few to admit of an opinion being pronounced in respect to chronic cases, he has found the addition of great advantage in many cases of the acute form. Although in the various forms of rheumatism in which he has employed this treatment he has not had to have recourse to preliminary bleeding, he by no means denies that this may not be occasionally desirable in the robust.

In treating acute articular rheumatism in this way, its course has usually been cut short in from the third to the fifth day, convalescence rapidly following, and no trace of heart affection persisting. When the pains have been very severe, tepid applications of a very weak solution of corrosive sublimate have been made to the joints, with the most satisfactory results. Sometimes after a rapid amelioration by means of the colchicum, when the pulse still continues irritable, and the tongue remains loaded, an emetic or purgative expedites convalescence. Among the rheumatic affections of the *mucous membranes*, which may be rapidly and durably cured by means of the opiated colchicum, without the sublimate, may be specified angina, pulmonary catarrh, and influenza, gastric fever, catarrhal diarrhea, and catarrho-rheumatic conjunctivitis. In the case of catarrhal ophthalmia, even of a severe character, its remarkable efficacy may be watched step by step. Among affections of the serous membranes, pleurisy and perihepatitis stand prominently forward as amenable to this treatment. Of parenchymatous inflammations, pneumonia has been the only one in which the medicine has been tried, and that only in two slight cases, which recovered with rapidity. In muscular rheumatism of the head, loins, &c., from two to four doses have always sufficed. It is also of great efficacy in cases of rheumatic neuralgia, especially in facial or intercostal, in sciatica and odontalgia. But the case must be recent, or it will be of no avail. In odontalgia the results are truly remarkable, a single dose rapidly dissipating the pain. The distinction between the rheumatic form of odontalgia and that which arises from carious teeth is exhibited by the different effects of the colchicum. For the relief of odontalgia arising from carious teeth, the author, after having cleaned out the cavity of the tooth, introduces into it a morsel of nitrate of silver as large as a pin's head. In about a minute the moisture of the mouth dissolves this, and the mouth is then to be gargled with cold water, and the pain disappears. He has employed this plan of relieving the pain of carious teeth for the last twenty years, and he has seldom known it fail, even after the ineffectual trial of various other measures. It causes no pain, and it retards the progress of the caries.—*Bulletin de Thérapeutique, and Druggists' Circular.*

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Pepsin in the Vomiting of Pregnancy.—M. L. Corvisart, the *Lancet* says, has of late advocated the use of pepsin to allay extreme vomiting in pregnancy.

Veratrum Viride in Nervous Affections.

By John Stainback Wilson, M. D., of Columbus, Georgia.

I have read with great interest the article in the September number of the *Southern Medical and Surgical Journal* on "veratrum viride," in chorea and other convulsive diseases. Dr. Baker's views as to the *modus operandi* of this remedy are doubtless correct; and it is strange that the truth so ably enforced by him should have been overlooked by the mass of the profession, and even by those who have most extensively used and warmly advocated the great sedative. It would seem that a knowledge of the controlling power of veratrum viride over the circulation would almost inevitably lead to its use in convulsive affections originating in exaltation of nervous sensibility; yet, as already intimated, this practice appears to be almost unknown to the profession. Still Dr. Baker's declaration is not strictly correct, that "all that has been published, either in the "United States Dispensatory" or elsewhere, concerning the remedial power of this agent, was written in reference to its value in the treatment of febrile and inflammatory diseases." In an article published in this journal, in July, 1853, under the head of "a brief summary of my experience with the veratrum viride," may be found, among a number of others, a case of epileptiform convulsions which was successfully treated principally with veratrum viride. The following is an extract from the above article:—"The subject of the convulsions was an anæmic boy of ten or twelve years of age; the spasms were frequent and extremely severe, every paroxysm apparently putting the life of the patient in imminent danger; the veratrum, to reduce the frequency of the pulse, and ether inhalations to quiet the spasms, were the remedies almost exclusively relied upon; and these indications were fulfilled in the happiest possible manner, snatching the little sufferer from the very jaws of death." This quotation, while it may render some qualification of Dr. Baker's remark necessary, shows very plainly that the writer did not, at that time, fully apprehend the controlling power of the veratrum over the nervous system; and as this important truth has taken a more definite form in his mind since that time, his object in writing now is not so much to criticise and find fault as to return thanks to Dr. Baker for the practical demonstrations so forcibly presented in his article. I believe that the discovery of the sedative powers of veratrum viride in febrile and inflammatory diseases is among the greatest, if not the greatest, boon of modern therapeutics; and if it should be found to possess equal power over nervous affections, its virtues cannot well be over-estimated. My experience with it in the latter class of disorders is quite limited, but in the former not inconsiderable; and I can truly repeat the declaration made in the above quoted article, published by me in 1853, and based upon the result of twenty-five cases of various disorders:—"I have never seen it fail in reducing the frequency of the pulse, while there was generally an improvement in its volume."

My experience fully corroborates Dr. Baker as to the size of the dose. When there is no urgent necessity for a prompt effect, I generally begin with only three or four drops for an adult, every three hours, increasing one drop each dose until the pulse is sufficiently reduced. By pursuing this plan I have almost always succeeded in accomplishing the desired effect, and without a single unpleasant symptom—without even the slightest nausea: indeed, in many cases patients could not tell from their feelings that they were taking anything more than so much water; and yet the pulse may thus be pleasantly and gently reduced from one hundred and forty to sixty, or even lower. When nausea and vomiting do occur they are very distressing and peculiar; but I have never had any difficulty in giving relief by diminishing the dose' or by giving a little brandy, or ether, or morphine, or something of that kind. I trust that Dr. Baker will continue to push his investigations in the line marked out by him, and that others will follow his example, until the controlling power of veratrum-viride is as fully demonstrated in nervous as it is in vascular disorders.—*Southern Med. and Surg. Jour.*

Injection of the Per-Sulphate of Iron for the Cure of Varicose Veins.

James Hickey, Ireland, æt. 46, laborer, admitted Nov. 10th, 1859. States that he has had varicose veins for twelve years, and varicose ulcers for nine, and has always enjoyed good health. Knows no cause of their appearance excepting his work, which obliged him to be constantly on his feet; has been a hard drinker. Into the internal saphenous vein of this patient, five inches below the internal condyle of the femur, five minims were injected; no unpleasant symptoms followed. The varicose veins are obliterated, and the ulcers healed.

Case 2.—Edwin Hughes, Ireland, æt. 37, laborer, admitted Dec. 22d, 1859. States that he has had varicose veins for fifteen years, and ulcers for ten. Had been under treatment different times for the ulcers, which had healed and then returned when he resumed work; has always been healthy otherwise. Into the external saphenous vein ten minims were injected, and into internal five. On the second day after the operation this patient was taken with a chill, followed by a fever—no sweating. He complained of severe pain in the head; the eyes were sensitive to the light; the tongue coated with a white fur in the centre, and fiery red on the edges, also pointed; the pulse quick, 100 per minute, and bowels constipated; the skin hot. On examining the leg it was found inflamed in the course of the veins injected. This patient was ordered to take sulph. magnesia, ℥ i., and at bed-time, pulv. doveri, gr. x., and cold applications to the leg inflamed. The above symptoms soon subsided, and suppuration only occurred in the external saphenous, into which ten minims had been injected. This patient left the hospital on April 2d. The veins were entirely obliterated, and the ulcers healed.

Case 3.—James Murphy, Ireland, æt. 30, laborer, admitted Feb. 11th, 1860. Stated that two years ago he had erysipelas of the leg now diseased; also had an abscess near the knee-joint. After he had recovered from the erysipelas, he noticed for the first time that the veins were enlarged and tortuous, and that an ulcer appeared a few weeks after, for the treatment of which he now comes to the hospital. Into the internal saphenous five minims were injected. This patient left the hospital April 8th, entirely cured.

The above cases were operated on by Dr. Isaacs, the visiting surgeon, Feb. 18th. The injection he used was composed of the

℞.—Per-sulphate of iron, ... ℥ i.
Water, ... ℥ iii.

And the same used in the following cases:—

Case 4.—Ernest Muller, Germany, æt. 34, blacksmith, admitted March 28th. States that twelve years ago he noticed the veins of his right leg were becoming enlarged and knotty, and that seven years ago an ulcer appeared, which had healed at various times under treatment, and then returned when he resumed his labor. Into the internal saphenous was injected by Dr. Turner, the resident physician, four inches below the internal condyle of the femur, ten minims. This patient left the hospital April 11th. The vein injected was obliterated, and the ulcer (two inches by three) healed. No unpleasant symptoms followed the operation.

Case 5.—John Kelly, Ireland, æt. 26, moulder, admitted March 28th. States that he has had varicose veins for eighteen months; was obliged to leave his work. Had an ulcer (now three inches long by one in width) for four months. Into the internal saphenous, four inches below the internal condyle of the femur, I injected twenty minims, and into a branch of the same, five. The veins are now obliterated, and the ulcer healed.

Case 6.—Sarah Garland, Ireland, æt. 46, servant, admitted March 28th. States that her right leg began to swell four weeks before her first confinement, twenty-two years ago; has continued swollen ever since; that an ulcer appeared six years ago, for which she had been treated at various times at Bellevue Hospital; has always been healthy otherwise. Into the internal saphenous, four inches below the internal condyle of the femur, five minims were injected. The vein is now obliterated, and ulcer healed.

In the last two cases (5 and 6), that portion of the veins injected has entirely sloughed out. The injection seemed to be too concentrated, destroying the veins and tissue immediately surrounding. No constitutional symptoms have occurred. The sloughs have now been thrown off, and the ulcers resulting are nearly healed. Dr. Turner and myself have since operated upon four other cases, in which nothing of the kind has resulted. The injection used was composed as follows:—

℞.—Per-sulphate of iron, ... ℥ iss.
Water, ... ℥ vii.

[*Medical Press, April 28th, and Cincinnati Med. and Surg. News.*

Valerianate of Strychnia.

By R. Wysong, M. D., of Charlotte, N. C.

The above compound, so far as my knowledge goes, has never been introduced into the Pharmacopœias, either of this country or of Europe. I feel, therefore, some delicacy in bringing it before the profession; but believing, as I do, that it will prove an acquisition to an already long list of medical preparations, and trusting to the liberality of the members of the profession for a fair trial of this new preparation before they condemn it, I will give my limited experience with it.

I have been using the valerianate of strychnia some ten months, and find that it is more particularly adapted to those cases where there is general debility, accompanied with nervous excitability, loss of appetite, indigestion, constipation, depression of spirits, and all the symptoms following more or less on the want of tone in the nervous system. Heretofore, in many of such cases, I have used strychnia, and although they generally improved under this treatment, yet I never met with as complete success with it as I have in similar cases with the valerianate of strychnia; hence I am led to believe that, in all such cases as above mentioned, we have in this preparation a very reliable and useful remedy.

The preparation I have been using is prepared by dissolving sulphate of strychnia in valerianic acid. So simple a preparation can be put up by any physician or druggist. I have been using it in the following proportions:—

Sulphate of strychnia, ... gr. viij.
Valerianic acid, ... ℥ i.

But this quantity may be altered to suit particular cases.

The following are some of the cases in which, among others, I have used it with entire satisfaction:—

May, 1859.—Mr. E., aged 45; has suffered with asthma for fourteen years; has tried various remedies without the least benefit. The paroxysms came on about once a week, he never passing two consecutive weeks without having one; is very nervous, and suffers from general debility.

Jan. 19*th*, '59.—Prescribed

℞.—Sulphate of strychnia, ... gr. i.
Pure water, ... ʒ i.
Acetic acid, ... q. s.

Directed ten drops three times per day, to be increased one drop per day until the dose reached thirty drops. Kept him on this prescription one month without any apparent benefit.

Feb. 20*th*.—Prescribed

℞.—Valerianate of strychnia, ... ʒ i.
Water, ... ℥ i.

Directed ten drops three times per day, to be increased as above. Has never had but one paroxysm since he commenced with this prescription, and is now, to all appearances, in good health. The medicine was kept up about one month.

Sept. 20th.—Has continued free from asthma; occasionally, during damp or rainy weather, experiences slight hoarseness, with disposition to clear the throat. This is generally relieved by a few doses of the sol. valerianate of strychnia.

May, 1859.—Mr. R., aged 60; has had asthma since July, 1858, the paroxysms increasing in frequency each week. He now has one nearly every day, and sometimes two per day. In conjunction with asthma, he has bronchitis, also indigestion, torpor of the liver, as indicated by decided yellow hue of the skin, constipation, and ashy stools, he never having an evacuation without taking some purgative; at times there is decided stranguary; this seems to be superinduced by constipation, as it is always relieved by free action of the bowels. Pulse over 100, small, and at times can scarce be counted; great general debility—spends more than half the day in bed; very nervous, so much so that by reading the least exciting newspaper article, or even conversing with a friend, will at times bring on a paroxysm. Cannot sleep in the recumbent posture, but is compelled to be propped up nearly straight in bed. The paroxysms come on generally about 3 P. M., but may be brought on any hour by the least excitement. Has been in the habit of taking nauseants when he feels an attack coming on, which, after several hours, relieves him for the time.

May 13th.—Prescribed

℞.—Valerianate of strychnia, ... ʒ i.
Water, ... ℥ i.

Directed to commence with five drops three times per day, to be increased three drops per day until the dose reached thirty drops. For several weeks had no sensible effect, owing to the dose being too small, and very irregularly taken; in fact, he seemed to be growing worse.

May 31st.—Prescribed

℞.—Acetate of squills, ... ℥ i.
Tar. ant., ... gr. ij.

Directed to begin one hour before the usual time for attack; teaspoonful every fifteen minutes, until nausea was produced. At the same time prescribed

℞.—Valerianate of strychnia, ... ʒ ij.
Water, ... ℥ i.

Directed fifteen drops three times per day, to be increased one drop per day as above. After the fourth day, as there had been no paroxysm, directed the nauseous mixture to be left off.

June 11th.—Has had no return of paroxysm; no sign of bronchitis; bowels regular; skin greatly cleared up; pulse seventy, rather full and strong; general health improved in every respect, so much so that he drives out several miles every clear day, and sleeps without inconvenience in a recumbent posture. Continued the valerian, thirty drops three times per day.

July 1*st.*—No return of asthma; health very much improved; seems quite free from nervous excitability. Continued the valerianate of strychnia as before.

Sept. 20*th.*—Continued free from asthma up to the latter part of August; had not been taking the medicine regularly for some weeks. About this time, during a very damp day, drove several miles to see a neighbor; upon reaching there sat down in a draft until completely chilled, which brought on his asthma. Since that time has had one paroxysm. Saw him September 8th. Prescribed valerianate of strychnia as before. He is now enjoying his usual health.

I have given the above case at some length, in order to show more fully what I conceived to be the effect of the medicine. I doubt very much whether the case will ever be permanently cured; but by the use of the above preparation the disease has evidently been kept at bay, and the patient's general health very much improved; and by long-continued use of the remedy, he may possibly break up all tendency to asthma.

I have used valerianate of strychnia with very great success in the treatment of females. One case of inflammation of the ovarian gland followed by suppuration, in leucorrhea; of course, in such cases, I also applied local means.—*Southern Medical and Surgical Journal.*

Selections.

A Spiritualist Doctor.—The following incident is from the *New York Times*, upon whose responsibility we copy it:—A short time since the child of one of our up-town families was suddenly seized with a sickness, which seemed so serious, that immediately the family physician, a man of long beard, long bills, and its accompaniments, was sent for in great haste; but, alas! he came not, and the sudden culmination of the disease into a terrific convulsion compelled the family to abandon their regular doctor and send for the nearest one, who proved to be an educated man of the old school—a serious objection, indeed, to the family, but which, in their distressed situation, could not well be helped. The character of the difficulty was quickly perceived, and an emetic speedily removed a quantity of undigested and improper food, restoring the child to comparative health. The thanks of the whole family were prodigally bestowed upon the physician, the preserver of their child, who was requested to continue his attendance till the child was entirely recovered. The next morning brought the tardy Dr. Pellets, who was met with a storm of reproaches for his neglect and inattention, and with the statement that if they had waited for him their child would now have been a corpse, and that now, as the doctor had done so much for them, they could never repay him, and an intimation was held out that they should continue to employ him for the future. Dr. Pellets could not afford to lose so valuable a family without a struggle to retain it; so he said, commisseratingly: "I regret, my dear madam, the alarm you have been under, and the danger in which your beautiful darling has been. At what hour did you say the child began to improve?" "It was just as the clock struck four," was the answer. "Ah, my dear lady, I thought it was so. It was five minutes before four o'clock when I entered my house and saw your call upon my slate. My spirit was put into immediate communication with your child, and through it I was enabled to act upon the convulsed spirit of your charming little cherub!" "Is it possible, my dear Doctor Pellets? We thought it was almost a miracle, and foolishly attributed it to the action of this allopathic's poisonous emetic, which indeed only brought a few raisin skins and stones and a little bit of mince pie it had eaten! Ah! Doctor, forgive us for doubting you, and the hard words and harder thoughts we have had for you." Poor Dr. Squills was incontinently, most unceremoniously, kicked out, and the spirits are in full favor. Even a doctor with journeymen assistants can't compete with one who has spirits at command with less trouble than Alladin.—*Druggists' Circular.*

Treatment of Epidemic Whooping-Cough by Vaccination.—According to the statement of Dr. Otsolig, the above-named treatment, recommended by French physicians, was repeatedly tried in the hospitals *des Kownoschen Gouvernments*, with the following results:—1st, the vaccination passed through its regular stages during this disease; 2d, it had in some cases an obviously favorable result upon the issue of the cough, cutting short its duration, and modifying the violence of its attacks; 3d, in many cases no perceptible impression was made upon the disease. In some cases the internal use of tannin, (four grains, in broken doses every twenty-four hours,) in connection with an infusion of senna leaves, proved to be of great value, six days' continuance often being sufficient to cure the disease.—*Gruvael's Notezen, and Southern Med. and Surg. Journal.*

Lactagogue Effects of the Leaves of the Castor-Oil Plant.—At the meeting of the Medical Society of London, on the 12th ult., Dr. Routh exhibited three preparations of the leaves of the castor-oil plant—a tincture and liquor (doses of each one dram), and an extract (dose, five grains.) The leaves were obtained from Australia, and the drugs prepared by Mr. Greenish, of London. The Society would remember that Dr. Routh had read a paper on the subject of the lactagogue effects of this plant, the leaves of which, applied to the breasts as poultices, and as fomentations to the vulva, for three days at intervals, were used in Bonavista, to induce milk in the breasts of women within catamenial ages, but particularly in those women who had borne children. The milk, once produced, could be perpetuated by the simple irritation effected at the nipple by the suction of a child. These facts, related by Dr. M'William, had been confirmed in part by Dr. Tyler Smith. Dr. Routh had published his experience on the subject also, in a series of papers. To lying-in women, with a deficiency of milk, Dr. Routh had given the infusion, in combination with conger-eel soup, and the effect in determining a copious flow of milk had been remarkable. He had administered the extract to unmarried women within catamenial ages, and the effect had been to produce intense pain in the breasts; but as he could not find anybody in that case who would try the effects on a child, he had not yet induced milk in the breasts of such. After three or four days the symptoms were relieved by a copious leucorrhea. As it was possible that a larger experience of this remedy might enable us to convert some married women, within catamenial ages, into wet nurses, and as it undoubtedly acted as a powerful lactagogue in suckling women, he was desirous that others also should experiment on the subject, and therefore to direct them where it could be procured.—*London Lancet.*

Case of Puerperal Convulsions Successfully Treated by Subcutaneous Injection of Morphia.—Medication by subcutaneous injection of various remedies, especially the salts of the alkaloids, begins to play quite a prominent *rôle.* Although we look upon the subject with some doubts of its ultimate success, and fear that, as is usually the case with new modes of treatment, subcutaneous injection will be carried to the extreme, and for this very reason its true merits will not be put in the proper light; yet we cannot omit to record an observation coming from so high an authority as Prof. Scanzoni undoubtedly is. From one of the recent numbers of the *Bulletin de Thérapéutique*, the *Medical Times and Gazette* quotes a case of puerperal convulsions, recorded by Scanzoni, occurring in a robust primi para, twenty-one years of age. When labor commenced, convulsions, with loss of consciousness, supervened. The entire body, and especially the extremities, were œdematous, the urine contained albumen, and presented to the microscope numerous fibrinous cylinders. Venesection, a bath, and cold irrigations to the head, were prescribed. Later, a solution of meconate of morphia was subcutaneously injected three times, and from this time until the termination of labor the convulsions (which, as a rule, it will be remembered, not only become more violent, but also more frequent, with the progress of labor,) abated. There were but two paroxysms in course of nine hours after the injections had been made; while before there had been three fits within less than two hours.—*Med. and Surg. Reporter.*

Subcutaneous Injection of a Solution of Atropine in Tetanus.—While this form of medication is now attracting much attention, it becomes our duty to record such clinical facts as bear upon the subject. In one of the recent meetings of the Société de Chirurgie, at Paris, we are informed by the *Gazette Hebdomadaire*, a case of traumatic tetanus was reported, occurring in the practice of a distinguished provincial physician, Dr. Pescheux, in which this treatment proved entirely successful. The patient had received, from the fall of a chimney, among other injuries, a complicated fracture of the leg. All went well until the fifteenth day, when Dr. Pescheux conceived the idea of practicing a subcutaneous injection of sulphate of atropine on the medium line of the nape of the neck. It was done; the symptoms of atropine poisoning became very well marked. When these subsided the tetanic symptoms

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By the following process a syrup can be obtained much more easily, of four times the strength, and quite transparent. It is an adaptation of Finley's process for syrups of oleo-resinous substances to this drug:—

SYRUPUS LACTUCARII.

℞.—Lactucarium,	½ ounce.
Carbonate of magnesia,	2 drams.
Sugar, in coarse powder,	14 ounces.
Alcohol, water, each,	q. s.

Rub the lactucarium first with the carbonate of magnesia and an ounce of sugar, until thoroughly reduced to powder, and then with a fluid ounce of alcohol; after which pour in water, with constant stirring, until half a pint has been added. The whole is now poured into a paper filter; and after the liquid has ceased to pass, pour on more water until a pint has been obtained. Evaporate this liquor to nine fluid ounces by a moderate heat (150° Fah.), add the remainder of the sugar, and by the aid of the heat form a syrup, which should, when finished, measure a pint.

Syrup of lactucarium thus prepared has the sensible properties of the drug in a marked degree; is perfectly transparent, with the color of officinal paregoric at first, but becomes rather darker. Each teaspoonful contains the soluble portion of nearly two grains of lactucarium, or fifteen grains to the fluid ounce.

SYRUPUS CAPSICI.

℞.—Cayenne pepper, in fine powder,	2 drams.
Carbonate of magnesia,	1 dram.
Sugar, in coarse powder,	14 oz. (troy).
Alcohol, water, each,	q. s.

Rub the Cayenne pepper first with carbonate of magnesia and sugar, and then with a fluid ounce of alcohol, and slowly pour in the water until six fluid ounces have been added. The whole is then to be transferred to a proper filter; and when the liquor has ceased to pass, pour on water until nine fluid ounces of filtered liquor are obtained. To this add the remainder of the sugar, and by a gentle heat form a pint of syrup.

Made in this manner, syrup of capsicum is a pungent, yellowish-brown syrup, each teaspoonful of which contains nearly two grains of Cayenne pepper.

SYRUPUS BALSAMI PERUVIANI.

℞.—Balsam of Peru,	2 drams.
Carbonate of magnesia,	2 "
Sugar, in powder,	14 ounces.
Alcohol, water, each,	q. s.

Proceed in the manner directed for spirit of capsicum, and make a pint of syrup. I have tried this process with cubebs and its oleo-resin, with assafœtida, and some other substances where the chief virtues reside in volatile oil and resin, without a satisfactory result; but there are many others to which it may be applied.—*Amer. Jour. of Pharmacy, May*, 1860.

ITALIAN "CACHOU AROMATIQUE."

Extract of liquorice, by infusion,	100	grammes.
Water,	100	“

Dissolve in water bath, and add

Powdered catechu,	30	“
Powdered gum,	30	“

Evaporate to the consistence of an extract, and then incorporate the following substances, reduced to powder:—

Mastic,	2	grammes.
Cascarilla,	2	“
Charcoal,	2	“
Orris root,	2	“

Concentrate the mass, remove it from the fire, and then add

Oil of peppermint,	2	grammes.
Tincture of musk,	5	drops.
Tincture of amber,	5	“

Pour it on a marble, previously oiled, and roll it (by means of a roller) to the thickness of a ten-cent piece. When the mass is cold remove the oil from both surfaces, by means of unsized paper; moisten it slightly, cover it with silver paper, let it dry, and then cut it into narrow strips, and divide these into minute squares or lozenges.

This preparation, much used by smokers to destroy the smell of tobacco, is also a stomachic and carminative of a very pleasant flavor.—*Bulletin de Thérapéutique.*

TO MAKE WATER-PROOF PAPER.

Dissolve eight ounces of alum and three and three-quarters ounces of white soap in four pints of water; in another vessel dissolve two ounces of gum arabic and four ounces of glue in four pints of water. Mix the two solutions, and make the mixture hot. Immerse the paper in the mixture, and then hang it up to dry, or pass it between cylinders.

The alum, soap, glue and gum form a sort of artificial covering, which protects the surface of the paper from the action of water, and to a certain extent from fire. This paper will be very useful for packages which may be exposed to the inclemency of the weather.—*Druggists' Circular, from Monitor de la Salud.*

FORMULÆ FOR WORMS.

Furnished by Wm. Scofield, M. D., of Stamford, Conn.

℞.—Fluid extract of spigelia,	½	dram.
“ “ senna,	1	“
Sulphuric ether,	1	“

In ascaris lumbricoides, infecting chiefly the ileum, occurring in considerable numbers before the age of puberty, and characterized by the usual symptoms, give an improved cathartic pill, followed by the above prescription, and repeat if necessary. If there be much nervous disorder, in children, give the fluid extract of valerian, in proper doses; if digestion is feeble, the chalybeate preparations. In oxyuris vermicularis, inhabiting the rectum and lower part of the colon, an enema of

Oil of turpentine,
Oil of pumpkin seeds, *aa*.,......................½ ounce.
(Rubbed together with the yolk of an egg.)
Warm water,................................1 pint.

Mucilaginous injections relieve the intense local irritation, and thus remove the cause of the sympathetic nervous disorder.

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Editorial.

THIRTEENTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—The American Medical Association met at the chapel of Yale College, New Haven, on Tuesday, June 5, at 11 o'clock A. M., and was called to order by the President, Henry Miller, M. D., of Kentucky. The attendance was unusually large.

Dr. Jonathan Knight, of Connecticut, on behalf of the Committee of Reception, welcomed the members of the Association to the hospitalities of the city. He spoke in graphic terms of the benefits accruing to the profession, and to the world, by the annual gatherings of the Association, which kept up a good feeling between distant members of the profession. He recommended such modes of action as would advance the general interests of the profession. He gave an epitome of the gradual progress of medicine, and dwelt at length upon the improvements in surgery made during the present century, alluding to the operation of lithotripsy, the ligation of the large arteries, and the introduction of anæsthetic agents. The address was listened to with profound attention, and greeted with marked applause.

The Convention organized by electing the following officers:—

President—ELI IVES, Connecticut.

Vice-Presidents—Wilson Jewell, Pennsylvania; A. B. Palmer, Michigan; Jos. P. Logan, Georgia; Jos. N. McDowell, Missouri.

Treasurer—Caspar Wistar, Pennsylvania.

The Chairman then appointed the following gentlemen as escorts to the officers elect:—

For Escort to President—Jonathan Knight, Connecticut; Dixi Crosby, New Hampshire.

For Escort to Vice-Presidents—W. C. Sneed, Kentucky; Wm. Brodie, Michigan; Edward Warren, Maryland; R. C. Foster, Tennessee; K. J. Bowditch, Massachusetts; Lewis A. Sayre, New York; John L. Atlee, Pennsylvania; Austin Flint, Jr., Louisiana.

The Committee on Nominations reported that they recommended the next meeting of the Association to take place in Chicago, Ill., on the first Tuesday in June, 1861.

They nominated the following officers:—

Secretaries—S. G. Hubbard, Connecticut; H. A. Johnson, Illinois.

Committee of Arrangements—N. S. Davis, Illinois; G. W. Freer, do.; De Laskie Willon, do.; E. Andrews, do.; H. W. Jones, do.; Thos. Bevans, do.; J. Bloodgood, do.

On Prize Essays—Daniel Brainard, Illinois; D. L. McGugin, Iowa; M. L. Leaton, Missouri; John Evan, Illinois; A. L. McArthur, do.

Committee on Publication—F. G. Smith, Pennsylvania; Caspar Wistar, do.; S. C. Hubbard, Connecticut; R. J. Breckenridge, Kentucky; Edward Hartshorne, Pennsylvania; H. F. Askew, Delaware.

Vice-President—R. D. Arnold, Georgia, in the place of Dr. Logan, resigned.

Communications and special papers were referred to the several sections, who met in different rooms, as follows:—

Section on Anatomy and Physiology, in President Woolsey's lecture-room.

Section on Surgery, in the Geological Cabinet.

Section on General Medicine, in the Geological Cabinet.

Section on Chemistry and Materia Medica, in the Laboratory.

Section on Meteorology, Medical Topography, Epidemic Diseases, Medical Jurisprudence and Hygiene, in the Laboratory.

The Committee on Nominations then reported the following appointments on standing and special Committees, which was received and adopted, and the nominations accepted:—

Committee on Medical Literature: Frank H. Hamilton, New York; Edward Warren, Maryland; Charles A. Lee, New York; J. W. C. Ely, Rhode Island; E. H. Clark, Massachusetts.

On Medical Education: Sevin T. Jaynes, Virginia; Christopher C. Cox, Maryland; J. C. Bradbury, Maine; L. H. Steiner, Maryland; M. A. Patten, Missouri.

On the Surgical Treatment of Strictures of the Urethra: James Bryan, Pennsylvania.

On Drainage and Sewerage of Large Cities—their Influence on Public Health: A. J. Semmes, Louisville; C. Boyle, and C. M. Dove, District of Columbia.

On Puerperal Tetanus—its Statistics, Pathology and Treatment: D. L. McGugin, Iowa.

On Anæmia and Chlorosis: A. P. Ayres, Indiana.

On Alcohol and its Relations to Man: J. W. Dunbar, Maryland.

On Milk Sickness: Robert Thompson, Oramel Martin, Ohio; S. W. Bemis.

On Microscopic Observations on Cancer Cells: George W. Norris, Pennsylvania.

On Blood Corpuscles: A. Sager, Michigan.

On the Hygienic Relations of Air: C. C. Cox, Maryland; Charles W. Parsons, Rhode Island.

On Quarantine: D. D. Clark, Pennsylvania; M. Snow, Rhode Island; Wilson Jewell, Pennsylvania; E. Fenner, Louisiana; J. W. Houck, Maryland.

On Medical Ethics: Paul F. Eve, Tennessee; J. A. Morphy, Ohio; N. L. Linton, Missouri; R. S. Powell, Georgia; B. F. Schenck, Pennsylvania.

On Tracheotomy in Membranous Croup: A. N. Dougherty, New Jersey; George H. Gay, Massachusetts; J. M. Minor, New York.

On the Effect of Perineal Operations for Urinary Calculi upon Procreation in the Male: J. S. White, Tennessee; J. B. McCaw, Virginia; R. C. Foster, Tennessee.

On Mercurial Fumigations in Syphilis: D. W. Yandell, Tennessee.

On the Cause and Increase of Crime, and its Mode of Punishment: W. C. Sneed, Kentucky.

On the Microscope: R. C. Stiles, Vermont.

On Gangrene of the Lungs: C. F. Allen, Vermont.

On the Relations which Electricity Sustains to the Courses of Disease: Isaac Capelbury, Indiana.

On the Morbid and Therapeutic Effect of Verbal and Moral Influences: Alfred Hitchcock, Massachusetts.

On the Causes of the Extinction of Aboriginal Races, more Especially of the Red Men of America: George Suckley, New York.

To Report on the Practical Workings of the United States Law Relating to the Inspection of Drugs and Medicines: E. R. Squibb, New York; F. Bowditch, Massachusetts; Prof. Joseph Carson, Philadelphia.

On the Causes and Treatment of Ununited Fractures: E. K. Sanbone.

On Diphtheria: Alonzo Clark, New York.

On the Effect of Stimulants in the Treatment of Fractures: John W. Russel, Ohio.

On Dislocation of the Hip and Shoulder Joints Moses Gunn, Michigan.

To Investigate the Conditions Demanded for a Diploma of Doctor of Medicine in the various Schools and Universities of Europe: J. Baxter Upham, Massachusetts; Robert Thompson, Ohio; George C. Shattuck, Massachusetts.

Dr. Reese, chairman of the Committee on Medical Education, read an able and interesting report, with resolutions, defining the qualification and course of study of students, which elicited much discussion; and, inasmuch as this is a subject of interest to the profession, we shall recur to it next month, and shall also publish an abstract of the proceedings of meeting of medical teachers.

In respect to the fulfillment of the objects of the Association, this Convention is regarded as a highly successful one. Over five hundred delegates registered their names, representing almost every State in the Union, and in point of character and talent will compare favorably with any former meeting.

The division of the Association into sections materially facilitated the deliberations. A large number of papers were presented, and being referred to the appropriate section were considered by each. The sections held their session at the same hour in different parts of the institution.

The sections on practice of medicine, materia medica and surgery were quite largely attended by the members, as well as other spectators, and will furnish for the next volume many valuable papers.

J. KNEELAND, M. D., of South Onondaga, N. Y., writes to us concerning the seed of the *triosteum perfoliatum*, or fever root, as follows:—

"SOUTH ONONDAGA, N. Y., May 17, 1860.

"*Messrs. Tilden & Co.*:—Please permit me, through your journal, to inform some of your subscribers, who have written to me for information, and some of whom have also requested me to send them seeds of the "*triosteum perfoliatum*," or fever root, that I have none of the seeds, and can obtain none until they grow next fall. I failed to save any seed last year, and regret my inability to supply the demand for it which has reached me during the fall and winter from four different States. The prevalence of onychia, or whitlow, may hence be inferred, as well as the desirableness of an efficient remedy for a most grievous and often disorganizing local malady. The medical gentlemen who have applied for seed shall be supplied as soon as it grows; and I take this way of answering them all at once, through your journal. Respectfully yours, &c.,

"J. KNEELAND."

FRANK H. YOUNG, M. D., late of the Berkshire Medical College, and with Dr. Childs, has attached himself to the "Nestorian Mission," and sails early in July, from Boston, to assume his duties of physician thereto. He carries with him the friendship and best wishes of a large circle of friends.

BEING unable to supply our correspondents and subscribers with the early numbers of our JOURNAL containing articles upon ignatia and colchicum, at their request we republish them in this number.

THE *San Francisco Medical Press*, edited by Dr. S. Hooper, Professor of Anatomy and Surgery in the University of the Pacific, of sixty-four pages, is the title of a new journal recently established.

THE

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Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER VIII.

CERASUS SEROTINA.

(*Wild Cherry—Black Cherry—Wild Black Cherry:* the Inner Bark.) *Natural Order*, Rosaceæ; *Linnean System*, Icosandria—Monogynia.

THE genus *Cerasus*, originally instituted by Tournefort,, was afterwards included in *Prunus* by Linneus, and then again separated from it by Jussieu, and became recognized by botanists generally as a distant genus. Torrey and Gray so considered it in their "Flora of North America," and described the black cherry under the name *cerasus serotina*, the name originally given it by De Candolle; while the choke cherry, called by Linneus *prunus virginiana* is named by them *cerasus virginiana.* But, as if to perpetuate this confusion, Dr. Gray, in his recent "Botany of the Northern United States," has included every species of the plum and cherry under the generic term *Prunus;* thus restoring the original name given it by Linneus, and calling the species *P. serotina*, as first named by Ehrhart. The name *Cerasus*, an Asiatic town, whence the cherry was supposed to have been derived, has always been associated with this fruit, and should, if possible, be retained; while *prunus*, the ancient classical name of the plum, should not be abandoned for the same reason, and especially so since their botanical differences are such as to constitute distinct genera. The U. S. Pharmacopœia has always adhered to the old nomenclature, in which it is followed by the U. S. Dispensatory of Wood and Bache, calling the black cherry *P. virginiana*, not recognizing the genus *cerasus*. We deem it, however, desirable that the term *cerasus* should be used wherever the cherry tree is indicated; while *prunus* is reserved for the plum. Were this rule to be observed, the confusion which has hitherto prevailed in regard to their nomenclature would be removed.

The genus CERASUS consists of trees and shrubs, which may be divided into several natural groups or sections, founded on the mode of flowering, and the persistence or non-persistence of the leaves. We have four indigenous species within the limits of the United States, viz: *C. pumila*, dwarf cherry; *C. pennsylvanica*, wild red cherry; *C. virginiana*, choke cherry; *C. serotina*, wild black cherry. All of these possess the same medicinal properties, and are employed for the same purposes.

Physical Properties and Chemical Composition.—The wild cherry bark employed in medicine is the inner bark of the trunk and branches, though that of the roots is most active. It loses its sensible properties by age and exposure to air and light, and should therefore be kept in close-covered bottles or tight boxes, and recently dried. It is of a reddish cinnamon color, brittle, and easily pulverized, having a reddish-gray fracture, and the powder a deep fawn color. The odor when fresh, or boiled in water, resembles that of peach leaves; taste bitter and aromatic, penetrating and not disagreeable. Its sensible properties are imparted to water, hot or cold, the infusion presenting a clear reddish color not unlike Madeira wine. Boiling destroys, in a great measure, its peculiar flavor, partly from the chemical changes effected by heat, and partly from the volatilization of its active principles.

Wild cherry bark has been analyzed by different chemists, and the results do not differ in any important degree. Proctor detected in it *starch*, *resin*, *tannin*, *gallic acid*, *fatty matter*, *lignin*, *red coloring matter*, *salts of lime and potash*, *and iron*. By distilling the same portion of water successively from several different portions of the bark he also obtained *volatile oil*, associated with *hydrocyanic acid.* The volatile oil resembled that from bitter almonds in its medicinal and poisonous properties, and was of a light straw color. Two drops of it proved fatal to a cat in less than five minutes. All experiments hitherto made go to show that the volatile oil and hydrocyanic acid do not exist ready formed in the bark, but are the result of the action of water upon *amygdalin*, which is one of its constant constituents. Such a change, however, necessitates also the existence of *emulsin*, or a nitrogenous principle analogous to it. Dr. Wood remarks, that as this becomes decomposed at the temperature of boiling water, we can readily understand how the properties of the bark are destroyed by decoction. But to understand this fully requires further elucidation.

It is now ascertained that both *emulsin* and *amygdalin* are contained in the leaves of the cherry laurel, peach blossoms, the inner bark of every species of cerasus, the root bark of the mountain ash, the kernels of the cherry, peach, plum, apricot, nectarine, bird cherry and cherry laurel, as well as the seeds of the apple, choke-berry (*pyrus arbutifolia*) and mountain ash (*P. americana*). All these produce volatile oil and prussic acid on distillation. That the hydrocyanated essential oil does not pre-exist in the bitter almond, nor in any of the substances above-named, is evident from the fact that no odor of it is given off when they are heated; nor is any removed with the fixed oil by expression, nor by the solvent action of ether. No volatile oil can be obtained from any of these substances unless water come in contact with them, when it is promptly generated, as indicated by the smell. Accordingly, not only the distilled waters of the above-named substances will be found to contain hydrocyanic acid, but also their expressed juices, diluted with water. At first sight it would appear that substances containing both emulsin or synaptase, and amygdalin, together with moisture, sugar, gum, &c., would necessarily generate volatile oil and hydrocyanic acid; but we are to recollect that, as in the cotyledon of the almond, the emulsin and amygdalin are in distinct cells, and have no means of acting on each other, but when bruised in water both dissolve, and decomposition immediately occurs. So it is, doubtless, in all other vegetable substances containing these principles. They are kept distinct for the very purpose of preventing such mutual reactions, as would otherwise take place, and thus generate principles which would render them unsuited to the purposes for which they were wisely created. If we mix a solution of one part of emulsin, the animo-vegetable principle which constitutes the mass of the cotyledon of the almond, in ten of water, with ten parts of amygdalin in one hundred of water—immediate decomposition ensues, the liquor becomes milky, and has the odor of bitter almonds—it will be found to contain sugar, hydrocyanic acid, formic acid and volatile oil, while the emulsin coagulates. By such a mixture we may readily produce a prussic acid of standard strength for medicinal purposes. The above facts prove the close chemical alliance existing between the genera amygdalus and cerasus, and which probably extends to other genera of the rosaceæ.

Your recent very elaborate and, doubtless, accurate analysis of the inner bark of the wild cherry yields as follows:—

		Per Cent.
Organic Matters, - - - -	6476.04	92.500
Inorganic " - - - -	524.96	7.500
Total, - - - - -	7000.00	100,000

		Per Cent.
Albumen, - - - - - - -	263.00	3.757
Gum, - - - - - - - - -	131.57	4.878
Starch, - - - - - - - -	164.00	2.342
Extractive, - - - - - - -	152.96	2.185
Tannin, - - - - - - -	70.56	1.008
Sugar, - - - - - - - - -	62.24	0.889
Coloring Matter, - - - - - -	612.76	9.882
Particular, Nitrogenized Principle, - -	152.32	2.716
Red Resin, soluble in alcohol - - -	297.28	5.675
" " " ether, - - -	171.52	2.450
Soluble Salts, - - - - - -	38.72	0.553
Insoluble Salts, - - - - - -	486.24	6.947
Volatile Oil, - - - - - -	"	"
Lignin, &c., - - - - - - -	428.88	60.718
Total, - - - - - - -	7000.00	100.000

From the mode of conducting the analysis it was not to be expected that volatile or hydrocyanic acid should be obtained, as they do not pre-exist in the bark, as already stated; but it was expected to find some nitrogenous principle analogous to or identical with *phloridzin*, and this was detected in the proportion of 152.32 parts in 7,000. It is what imparts bitterness to the cherry bark, as well as the other products of the genera *cerasus* and *amygdalus*, and is mainly the source of their tonic properties. As might be expected, it abounds most in the bark of the root, and hence its name. It is a neutral substance, having neither acid nor alkaline reactions, consisting of carbon, hydrogen and oxygen, and occurs in white, crystallizable, silky needles; soluble in 1,000 parts of cold and in all proportions of boiling water, very soluble in alcohol, and scarcely soluble in ether, cold or hot. *Phloridzin* may be easily obtained from the bark of the root of any of our native species of cerasus, by boiling them successively in two separate portions of water, each sufficient to cover it, and the decoctions set aside. At the end of thirty hours they will have deposited a considerable quantity of colored phloridzin, which may be purified by boiling for a few minutes with distilled water and animal charcoal, filtering, repeating this process two or three times, and then allowing the solution to cool slowly. The phloridzin will be deposited in a crystalline form. An additional quantity may be obtained by a second evaporation. Dr. Procter, of Philadelphia, has also proved the existence of phloridzin, or an analogous bitter principle, in the cherry bark, by the following process:—A portion of the bark was exhausted by alcohol, and the tincture evaporated to an extract. This contained the amygdalin, and whatever bitter matter and tannic acid existed in the bark. The extract was triturated with water, and with gelatine, to remove the tannic acid. The liquor was then filtered, and mixed with an excess of the emulsion of sweet almonds, containing, of course, the *emulsin* necessary for causing reaction between the amygdalin and water. A strong odor of hydrocyanic acid was produced, which had not previously existed in the solution of the alcoholic extract. As the emulsin was in excess, the whole of the amygdalin must have been destroyed. The liquid was evaporated to a soft extract and mixed with water. Sweet almond emulsion, now added, generated no more hydrocyanic acid, and there was none of the peculiar odor of that product; yet the taste was decidedly bitter, proving the existence in the bark of a bitter principle distinct from amygdalin. The cold infusion, therefore, contains the tonic principle (phloridzin), as well as the sedative product (hydrocyanic acid); and while boiling extracts its active matters, yet it coagulates and renders inert the emulsin, and thus prevents those reactions which result in the formation of the acid. The above analysis shows also that while the amount of tannic acid existing in cherry bark is very inconsiderable, that of resin is very great (five hundred and sixty-eight in seven thousand), and the albuminous matter equals the gum and starch united. The coloring matter is also greatly in excess compared with most of our indigenous barks.

Therapeutical Properties and Uses.—The physiological effects of the cherry bark, in moderate doses, are those of a tonic stimulant. The pulse is accelerated, and the vital energies generally invigorated. If the quantity taken be increased, and continued for several days, the action of the heart and arteries will be diminished: the pulse being reduced from seventy-five to fifty strokes in a minute, the vital forces, however, not being reduced in a corresponding degree. Indeed, some recent experiments lead to the conclusion that if the pulse be reduced in frequency by the continued use of full doses of the cold infusion of this substance it becomes, at the same time, fuller and stronger. These effects are what we generally see during the administration of tonics in hectic fever and other diseases of debility, in which, while the frequency of the arterial pulsations is considerably lessened, they become, at the same time, stronger and fuller. But as it is unsafe to reason in regard to the effects of medicinal agents, from health to disease, or *vice versa*, it may possibly be found that the cherry bark forms no exception to the general law relating to its influence over the physiological functions. With respect to its effects in certain morbid states of the system, there is scarcely any difference of opinion among practical physicians who have employed it to any great extent. They universally regard it as possessing both tonic and sedative properties, peculiarly fitting it to the treatment of a certain class of cases, and for which scarcely any substitute can be found in the whole vegetable kingdom. Such are cases of general debility, with impaired digestive function, nervous prostration and accelerated pulse; cases of hectic fever from pulmonary or other forms of scrofulous disease; and atonic dyspepsia uncomplicated with irritation or local inflammation. There are other forms of disease to which it seems specially applicable; but before referring to them more particularly, let us consider more in detail its uses and applications in the morbid conditions already mentioned. Clinical experience has established the fact, beyond all controversy, that many cases of morbid irritability of the nervous system will be greatly benefited by the use of a cold infusion of the wild cherry bark. These cases may, or may not be, associated with pulmonary disease; but in every instance, almost, the digestive organs will be found deranged, the secretions depraved, the biliary functions disordered, and the general strength diminished. Such a condition is often the result of an attack of acute disease, as a fever or inflammation of some important organ, or it may be consequent on malarial poison, in a quantity insufficient to produce distinct paroxysms of chills and fever. In either case we have found this remedy produce admirable effects. It rarely fails, indeed, if administered in appropriate form and doses, to abate the frequency and increase the force of the pulse, while it manifestly invigorates all the functions of the body. Those effects are doubtless partly due to the local impression made upon the gastric surface, and reflected to other parts of the system through the medium of the nerves, and partly to the absorption of its active principles into the blood, which, conveyed to the nervous centres, as well as to all the tissues, imparts a special influence to the vital forces, resulting in an increase of recuperative energy. But however the fact be explained, the function of primary and secondary assimilation experiences the general alterative influence, and healthy function follows in the wake of a more healthy blood. · It is universally conceded, at the present day, that the principal indication in phthisis is to improve the faulty nutrition, which may be regarded as the cause of the tubercular exudation, and strengthen the general system. Accordingly, we no longer find such drugs employed in this disease as tend to impair the tone of the digestive organs, such as antimony, squills, ipecacuanha, &c.: inasmuch as we find that as the nutritive function and the vital forces are strengthened by suitable hygienic means and internal remedies, the local as well as general symptoms yield—the disease is arrested, and possibly a cure may follow. At all events, there will be little occasion for those special remedies for cough, night-sweats, diarrhea, &c., which have hitherto been in such general use. There is not a single article of the materia medica, endowed with any virtues whatever, which has not been recommended by some author in the treatment of tubercular consumption, till at length all have been abandoned but cod-liver oil, the hypophosphites, opiates, and demulcents, unless we except the wild cherry bark. The fish-liver oils, as nutrients, where they prove acceptable to the stomach, are exceedingly valuable, supplying and renewing, as they do, the nuclei or rudimental molecules of all structures, thus promoting in a marked degree the function of nutrition, increasing the strength as well as the flesh, and giving increment to all the textures. The hypophosphites, of late so extravagantly extolled by their manufacturers, have proved thus far an utter failure in all cacoplastic and aplastic diseases for which they are recommended, as might, indeed, have been anticipated, inasmuch as their assumed efficacy is wholly based on an erroneous theory in regard to the deficiency of free phosphorus in the system in such affections. Opiates and demulcents will always be necessary in the treatment of pulmonary tuberculosis, as palliatives, though no one supposes they can exert any curative influence whatever. As the depraved constitution of the blood in scrofulous and tuberculous subjects—there being a diminution of red globules and a preponderance of fibrin—precludes all hope of amendment until corrected by appropriate remedial measures, the intelligent physician will first aim to remove or counteract the causes which have led to such a diseased condition of the blood. Medicinal agents, strickly so called, do not stand first on his list of remedial measures, but yield in importance to a due supply of food of a nutritive and digestible quality, free access to light, and a pure, dry atmosphere; regular exercise in the open air, suitable clothing, the removal, if possible, of all depressing mental or bodily influences, and especial attention to the functions of nutrition, secretion and excretion. The proper digestion and assimilation of food is essential to all hope of amendment in such cases, and in this connection the wild cherry bark is deserving very favorable notice. Experience of their good effects in this class of cases led the ancient writers on medicine, as Hippocrates, Galen, Celsus, and others, to recommend bitters and tonic infusions in these affections; and in this they have been followed by the best authorities of modern times, and especially by Dr. Rush, of our own country. Of these tonics, according to our own observation, no one possesses so many valuable properties as the cherry bark, in the form of cold infusion. The amount of hydrocyanic acid developed in the infusion is sufficient to allay, in a good degree, the cough and morbid irritability present, while its tonic properties invigorate the stomach and give tone to the whole digestive system. As an indirect result, the cough is abated and the colliquative sweats greatly lessened, while the appetite is improved, and diarrhea arrested. We do not say that these effects will invariably follow. There may be pathological conditions present which preclude all hope of essential benefit from any remedial agencies. But under favorable circumstances, before the disease has made great progress, and the tubercular deposition become extensive, such effects are often witnessed, and may be very confidently anticipated. No other single remedy, indeed, can be named which, while it exerts a soothing effect upon the cough, exerts so general a tonic influence over all the functions, not only without aggravating, but manifestly ameliorating any complication which may appear in the course of the malady. Nor can its beneficial effects be attained, to an equal degree, by any artificial combination of a supposed similar kind. We may add diluted hydrocyanic acid, or cherry laurel water, or some of the other narcotic or sedative articles, to a bitter tonic infusion, and we may further flavor them with *noyau*, almond emulsion, or any similar substance, and still we shall find that they yield in efficacy to nature's own combination, effected in her own laboratory. In a majority of cases of scrofulosis, under which we include all tubercular affections, we have found some of the chalybeate preparations, as iron by hydrogen, coöperate most efficiently in the curative results. Such a course, aided by proper hygienic appliances, and the use, if possible, of cod-liver oil, will place the patient under the most favorable circumstances for recovery or arrest of the disease. We can safely testify that we have not unfrequently seen confirmed tuberculosis arrested by such treatment—cases which, years ago, were pronounced hopeless, are now enjoying a comfortable state of health. It is, however, to be recollected always that the plan of cure must be appropriate to the stages and states of the disease, and the pathological conditions present. The functions of the liver are often seriously impaired, and yet overlooked, while the great importance of promoting the digestive and assimilating processes from the very commencement of phthisis is too little regarded. While, therefore, we attach less value to drugs than to hygienic influences in the treatment of this disease, yet the former are not to be wholly proscribed, and particularly the tonic now under consideration. Let us now see what is the testimony of others regarding this point. Dr. Eberle remarks: "In phthisis, the wild cherry bark has been employed with decided benefit. I have prescribed it often in hectic fever, and in some instances with evident advantage. There is, indeed, no difficulty in perceiving how this bark may produce beneficial effects in cases of this kind. It is well known now that the prussic acid, when judiciously administered, is capable of moderating—nay, even of removing—all the symptoms attending the early stage of pulmonary consumption. The testimony we have is too respectable and numerous to admit of any reasonable doubt as to its powers in this way. Now, the wild cherry bark contains no inconsiderable portion of this acid; and it is obvious, therefore, by using the infusion of it, we employ a medicine which contains prussic acid, together with a bitter and astringent principle, dissolved in a considerable portion of water. These ingredients would appear, I think, particularly calculated to produce good effects in pulmonary consumption, by at once lessening the irritability of the system, which the prussic acid does in an eminent degree, and supporting the strength of the patient by the tonic principles which it contains. I have already stated the power which this remedy possesses, when taken in large doses, of domininishing the action of the heart and arteries, and it is doubtless by its controling influence in this way that its action has been found so useful in diseases attended with an irritated or excited state of the circulation. It frequently lessens the frequency, tension and irritated state of the pulse; moderates the cough and profuse nocturnal perspirations; checks the diarrhea, and sustains the general strength of the system."—(*Treat. on Mat. Med.*, vol. 1, p. 302.) Prof. Wood remarks that "the joint tonic and sedative properties of this bark adapt it to the treatment of cases of general debility, with enfeebled digestion, an irritable state of the nervous system, and excessive frequency of pulse. Long before its chemical peculiarities were discovered experience had established this application of the remedy. In the treatment of pulmonary consumption it has, for many years, been a favorite in this country, and before cod-liver oil came into notice was probably more relied on than any other single medicine. It was employed not only in the advanced stages, when hectic fever had set in, but from the beginning, and often as a preventive, in cases in which a strong tendency to the disease seemed to be displayed. It was given with a view of imparting tone to the digestive organs and system generally, and thereby modifying the tuberculous diathesis, and was preferred to other tonics because it was thought to produce these effects with less danger of undue excitement. Now that it is known to be positively sedative to the heart, and to the nervous system, we can better understand its usefulness in that complaint. In other forms of scrofulous disease, presenting a similar complication of debility of the digestive and nutritive functions with frequency of the pulse, it is equally indicated."—(*Treat. on Ther. and Phar.*, vol. 1, p. 292.) Numerous authorities might be quoted to the same effect.

There are other forms of disease to which it is especially applicable, as hectic fever from whatever cause produced; debility attendant on convalescence from fevers or other acute diseases; functional nervous affections attended with a frequent, irritable pulse, restlessness and loss of sleep; and functional and organic affections of the heart attended with frequent irregular pulse and an anæmic state of the system. Where there is enlargement, with thinning of the cardiac walls, the cherry bark infusion, with iron, often affords decided relief. In the treatment of such cases in the General Infirmary of Edinburgh, we have seen Prof. Alison employ iron, in combination with digitalis, with good effect; but the cherry bark is a far more suitable remedy, and will be found to produce more beneficial effects. The iron, if given, should not be combined with it, owing to the tannic acid, but given separately. As an anti-periodic its powers are feeble compared with Peruvian bark, although I have known it prove successful in many cases of a mild character. In hysteria, associated with debility and atony of the stomach, it will be found serviceable; also in asthma under similar circumstances. In the *heaves* of horses, it has long been employed by veterinary surgeons as a remedy of decided power. As a remedy for dyspepsia it does not seem to answer as well, in a majority of cases, as the simple tonic bitters. In some instances this, doubtless, has arisen from its having been administered in too large doses. There are scarcely any cases in which other remedies will not have to be associated with it, especially small doses of mercurials or the iodides. Although not very well adapted to arrest paroxysms of an intermittent, yet it has been employed successfully as a prophylactic, as well as during convalescence where the disease has been arrested by quinine. In many of these cases in malarious districts, as we have often observed at the West, where there is a strong tendency to relapse from constant exposure to the exciting cause, the daily use of the cold infusion of this bark carries the patient along safely through the season when most liable to its recurrence, and if commenced again early in the following spring may ward off any attacks during the year. It need not be used, however, continually, nor need the infusion be very strong. From half a pint to a pint is the quantity usually taken in twenty-four hours. Used in this way, it will be found safer than quinine, and sufficiently efficacious.

There are other indications which it will fulfill, but they are perhaps sufficiently obvious without particular remark. Its therapeutical are closely connected with its physiological effects.

Preparations and Administration: Infusion, powder, prunin, fluid extract, compound fluid extract, wine, syrup, phloridzin.—The *infusion*, made with cold water, is perhaps the most eligible preparation. Half an ounce of the inner bark to a pint of water, and especially if prepared by percolation, will be of sufficient strength. One ounce of the bark, coarsely powdered, should be introduced into a common funnel, then packed somewhat coarsely, and a quart of cold water poured upon it, the point of the funnel being put into the mouth of a glass decanter. After the water has all passed it should be poured back into the funnel, and so repeated till it acquires the color of Madeira wine. Of this preparation, two fluid ounces may be given three or four times a day, or, in some cases, more frequently, if the full effect is desired, as in intermittents. The common infusion is made of the same strength, allowing it to macerate for twenty-four hours, and then strain.

The *powder* is not often used, from its liability to oppress the stomach, besides being less likely to undergo those chemical changes which are essential to its characteristic effects. The dose is from one to two drams.

Prunin, (*Tilden's.*)—Under this name we understand to be included the active principles of the bark, obtained from the hydro-alcoholic solution, on evaporation, viz: the resin, tannic acid, peculiar bitter nitrogenous matter, (phloridzin?) &c. Of course, it does not contain the hydrocyanic acid, which is volatile, and therefore cannot be relied upon to produce the full characteristic effects of the bark. It will, however, serve very well as a tonic, and possesses considerable anti-periodic power. Doses of five grains of it every two hours will arrest the paroxysms of an intermittent in, perhaps, a majority of cases. Being more concentrated, and free from starch, gum, woody fibre, &c., it is far preferable to the powdered bark, and accordingly is becoming very generally substituted for it. The ordinary dose is from two to six grains. The *prunin*, or *cerasein*, of B. Keith & Co., seems to be a very impure preparation, containing chloride of soda. It is of a deep umber brown color, bitter saline taste, and recommended in doses of two grains.

Fluid Extract.—This preparation is now in pretty general use among the physicians of the United States, and so far as we know gives entire satisfaction. Many, however, from economical motives, perhaps, prefer the cold watery infusion, prepared in the way above pointed out. The dose is half an ounce, repeated according to circumstances.

Wine.—The wine of wild cherry, prepared from the inner bark or the fruit, is a very pleasant stomachic tonic, for which purpose it is best adapted. Dose, from one dram to half an ounce.

Syrup.—This is an excellent preparation, much used, although not officinal. It is best made by macerating four ounces of the powdered bark in twelve fluid ounces of water, for two days, placing the mixture in a percolator, returning the fluid that filters through till it comes away clear, displacing with an additional quantity of water till twelve fluid ounces of infusion are obtained, then making this into syrup with twenty-four ounces of sugar. It will, however, keep perfectly well if only half this quantity of sugar be used. The dose is from a fluid dram to a fluid ounce. It is an admirable remedy in alleviating catarrh and the latter stages of bronchitis and whooping-cough, forming a good vehicle for ipecac, morphia, antimony, blood-root, &c., in ordinary coughs and colds. The syrup may also be prepared by adding three ounces of the fluid extract to thirteen ounces of simple syrup. Dose, two drams to one ounce.

Phloridzin.—This substance is not often found in the shops, but it is very desirable that it should become accessible to the practitioner, for there can be little doubt it stands next to quinine in anti-periodic power. Indeed, it has often been found to succeed where quinine has failed; and if it could be furnished in quantity sufficient to supply the demand, its use would soon become general. Ten grains of it, given during the paroxysms of an intermittent, will generally be found sufficient to arrest it. It is also applicable in all cases where quinine would be proper.

Cherry Pectoral.—The composition of this far-famed preparation is now very generally known. The proprietor was so kind, some years since, to communicate to us the mode of preparing it, as follows:—

℞.—Acetate of morphia, grs. iij.; tincture sanguinaria, ʒ iv.; wine of ipecac, ʒ v.; wine of antimony, ʒ iij.; simple syrup, ℥ ijss.; ol. bitter almonds, gtt. x.; alcohol, ʒ j.; acetic acid, gtt. xvi. M.

This is well adapted to acute bronchitis or catarrh, the early stages of croup, pneumonia and whooping-cough, but does a vast deal of mischief in the latter stages of these diseases, as well as every stage of pulmonary tuberculosis. No one can calculate the evils caused by the indiscriminate use of such empirical preparations. It is demonstrable that all such universal cure-alls must do vastly more harm than good. This forms no exception to the rule.

Colchicum Autumnale.

By Joseph Bates, M. D.

(Continued from July Number.)

Colchicum can claim as great antiquity as almost any medicinal agent now in use. It is mentioned by Dioscorides, Galen, and the ancients. In proof of its high esteem as a therapeutical agent, we have but to consult the Pharmacopœias of the United

States, Austria, Amsterdam, Brunswick, Danish, Dublin, Edinburgh, Paris, Geneva, Hamburg, Hanoverian, London, Lisbon, Russian, Saxon, Spanish, Swedish, Wirtemburg, and many others. There are few medicinal agents for which we can claim a greater variety in regard to the quality of its operations. It is valuable as an alterative, deobstruent, or, as some would call it, adenagic. As a cathartic in many diseases in which a deobstruent is indicated, it stands unrivaled. It is also used as an emetic; but where simple emesis is indicated numerous other articles are far preferable, on account of the violence of its operation. It possesses valuable diuretic properties as well as expectorant; the two last-mentioned, as well as many other properties ascribed to it, might with propriety be referred to its adenagic qualities. The various diseases in which it has been successfully administered, and for which it has been held in high esteem in this country and Europe, are quite too numerous to mention in connection with this brief notice. I will, however, instance a few from the list that might be quoted.

M. Metta has published the case of a woman in which the powder of colchicum was employed with success as a substitute for ergot of rye. She had an abortion at the third month; but the placenta not being expelled, and the pains having ceased, ten grains of powdered root of colchicum were given, in two doses. Half an hour having elapsed without any sensible effect, the same dose was repeated. Soon the orifice of the womb dilated, uterine contractions followed, and the placenta was removed by the hand, in a state of decomposition.

Some speak highly of its use in the treatment of cholera, others in tetanus, and again it will be found to be recommended in the treatment for plague.

Dr. Aldridge speaks of colchicum as salivating patients.

It has been used for the cure of gout and rheumatism, both acute and chronic, and by many regarded as more efficient than any other agent. It is said to have the property of alleviating pain, and lowers the pulse—(by this expression, I presume the author means to convey the impression that it diminishes the frequency of the pulse.) It has been highly extolled in the treatment of dropsies.

Some recommend it for expelling the tape-worm. Cases are on record of its curing chorea, hypochondriasis and hysteria.

Authors speak highly of it in some forms or grades of asthma, and other bronchial affections, such as inflammation of the lungs, catarrh, influenza, &c.

Puerperal fevers are said to be successfully treated with colchicum.

Balber speaks favorably of it in ophthalmia.

On account of its valuable alterative properties, some rely on colchicum in gonorrhea. It has been advised as extremely efficacious in leucorrhea.

Tait speaks in exalted terms of its use in scarlatina.

Bullock gave it in erysipelas.

It is highly recommended in constipation.

The tincture of colchicum is recommended as a liniment to rheumatic joints.

Cardiac neuralgia has been successfully treated with colchicum, as well as other forms of neuralgia.

A variety of cutaneous diseases are said to be cured with colchicum.

Many other diseases might be mentioned in which this agent is said to be useful, but I have already exceeded my limits, and leave the subject to abler pens.

Helonias Dioica.

By Dr. Thomas Close, of Portchester, N. Y.

Agreeable to my promise, some time since, I give you a few observations concerning my experience in the use of this remedy.

My attention was called to its use by reading the article of Dr. Lee, in the April number of your journal. The only preparation I have used of it is the fluid extract. My first trial was upon a female patient seventy-eight years of age, who had for a long period been failing in health, and had become so prostrated with anasarca and abdominal dropsy as to be helpless, requiring the assistance of persons in getting from and returning to her bed. Considerable febrile action had for several months been constantly present, with a tense pulse varying from eighty to ninety beats per minute.

Such was her condition when I commenced the use of the helonias. Her stomach was in a very irritable condition, rejecting her food and medicines. After giving the medicine, I remained and watched, with no little solicitude, its effects, expecting it would be likewise rejected; but instead I had the satisfaction of seeing it retained, and in a little time she became less restless, the moaning noise which she had been accustomed to make, almost constantly, ceased, and at the end of half an hour after it was given she fell asleep; the pulse became decidedly softer and slower than it had been for a long time.

When she awoke there was a decided increase of muscular power—more than I could have expected from its use, or that of any other remedy, in so short a time; indeed, she was able to do what she had not done for a long time without assistance. I was surprised at its effects, for Dr. Lee, in his article upon it, had given me no reason to expect so sudden and decisive a change. The increase of muscular power continued as long as she continued the use of the remedy, say about ten or twelve days, when she declined to take it any longer. During its administration I had given a teaspoonful of Dr. Squibb's concentrated spirit of nitre three times a day, without perceiving the slightest diuretic effect. Reflecting upon this, the idea was suggested of giving the nitrous ether a tonic and stomachic property, by combining it with the iodohydrargyrate of potassium. I accordingly dropped forty drops of the solution into an ounce phial, and filled it with the spirit of nitre. By the chemical action which occurred the mixture became red.

This mixture, given three times a day in teaspoonful doses, proved an active diuretic, and in anasarca of the feet and legs the disease was arrested, and the general health of the patient improved in a most unmistakeable manner. The spirits of nitre made by Dr. Squibb is fully three times as strong as that ordinarily purchased at drug stores.

Although the helonias possesses such remarkable tonic properties, I do not consider it a stimulant, for in every case where I have tried it whatever febrile action existed has been subdued. In my own case it has proved a valuable remedy, having suffered for three or four years with dyspnœa, a sequel of spasmodic asthma—to such an extent, that really life has been but a compromise between starvation and suffocation, for, indulging in food enough to keep up any degree of strength rendered the difficulty of breathing almost insupportable. Since I began the use of the helonias I have found the difficulty gradually lessen, and I am now able to eat and breathe with comfort, and my strength not only much greater than it was when I began its use, but rapidly improving.

I have had no opportunity to make observations concerning its other properties, but shall do so and report the results, for I have reason to believe that its value as a remedial agent is not fully understood by the medical profession.

Kousso in Tape-Worm.

By Dr. George B. Curtis, of Hawley, Wayne County, Pa.

I TAKE the liberty of sending you, for your journal, an account of three cases of tape-worm that I have had and treated within the last year, with which you can do as you think proper in regard to publishing. The cases all occurred in one family—English by birth—but they have lived in this country for five years, and lived well, as people of that nation in good circumstances generally do.

July last, Mrs. M., a middle-aged woman, of this place, requested my advice in regard to her own health and that of her children. She looked wan and debilitated; complained of giddiness, of being unusually irritable in her feelings, and of having at different periods within the last ten months great uneasiness in her bowels, followed several times of late by the passage of a yard or more of tape-worm.

She mentioned that two of her children also had all the ordinary symptoms of worms, particularly a little daughter two years old, that was sick most of the time, and had swollen lips, large abdomen, an occasional diarrhea, and had also passed a few joints of the same kind of worm. Her little son of four years had many similar symptoms, but otherwise was hale and hearty.

I advised her to try the oil of turpentine, in small doses, much after the method of Dr. Knox. Had her take half a teaspoonful three times daily, in a little compound spirits of lavender, interposing every third day with a dose of castor oil. She went through with this routine nine days in succession, passing the two last times of taking the castor oil many shreds and joints of the tape-worm (*tænia solium*); but, as some urinary irritation was supervening, I had her stop the treatment, and use mucilaginous drinks and cold infusion of bitter barks. All the bad symptoms and feelings disappeared, her health remaining good ever since, it now being about eleven months.

I tried the same vermicide remedies with the children, but with no success. Hence I got the Abyssinian product, kousso, and gave with good results. Had the little girl take, on an empty stomach, the following:—Kousso, ʒ i.; pulverized jalapa, grs. iij.; sweetened water, f. ℥ ss., in teaspoonful doses every ten minutes, until all was taken. The boy, twice her age, I gave just double the dose, in the same manner; and to our happy surprise we had two large and long tape-worms in from three to four hours thereafter. The smallest one from the younger child measured twenty-five feet, the other forty-five feet in length. The worms were broken into several pieces, and I discovered no heads in either case. The children have since remained free from any of their former symptoms.

Theorizing as to the origin and propagation of this species of human parasite may be interesting and profitable, but to my mind the greatest desideratum is attained in having a safe and effectual remedy.

Cimicifuga Racemosa.

(BLACK COHOSH—BLACK SNAKE-ROOT.)

THE cimicifuga is so named from *cimex*, a bug, and *fugo*, to drive away, the Siberian species being used as a bugbane. It is botanically classed in the natural order *Ranunculaceæ*, and with the *Polyandria Petagynia* of the sexual system. Its scientific and common names have varied, and still are so variously used among authors as to require caution in studying the plant. They are mainly as follows:—Cimicifuga racemosa, actæa racemosa, actæa cimicifuga, macrotys racemosa, botrophis serpentaria (?), serpentaria, serpentaria nigra, black snake-root, rich-weed, cohosh, black cohosh, squaw-root, rattle-weed, cohort, bugbane.

French Synonyms—Actée, Herbe St. Christophe.

German Synonyms—Fraubenförmiges Christophskraut, Schwaze Klapperschlangenwurzel.

The cimicifuga is a tall, stately plant, having a perennial root, and a simple herbaceous stem, rising, from a thick kotted rootstock, to the height of from three to eight feet. The leaves are few, bi-tripinnately divided, alternate, the leaflets cut-serrate. The flowers are white, in elongated, wand-like racemes; sepals 4–5, falling off soon after the flower expands; petals, or rather transformed stamens, 1–8, small, on claws, two-horned at the apex. Stamens numerous, with slender white filaments; pistils 1–8, forming dry, dehiscent pods in fruit; pods ovoid, sessile, the racemes in fruit becoming one to two feet long.

Cimicifuga exerts a tonic influence over both the serous and mucous tissues of the system, and will be found a superior remedy in the majority of chronic diseases. In all cases where acidity of stomach is present, this must first be removed, or some mild alkaline preparation be administered in conjunction with the remedy, before any beneficial change will ensue.

It possesses an undoubted influence over the nervous system, and has been successfully used in chorea, periodical convulsions, epilepsy, nervous excitability, asthma, pertussis, delirium tremens, and many spasmodic affections. Its tonic and anti-periodic virtues are well marked in remittent and intermittent fevers, and it has been found very useful in other febrile and exanthematous diseases, especially among children, when there exists a strong tendency to cerebral difficulty. It uniformly lessens the force and frequency of the pulse, soothes pain, allays irritability, and lessens the disposition to cerebral irritation and congestion. In febrile diseases it frequently produces diaphoresis and diuresis.

In doses of one dram of the tincture, repeated every hour, it has effected thorough cures of ophthalmitis conjunctiva without the aid of any local application. As a partus accelerator, it may be substituted for ergot, seldom failing to bring on speedily and powerfully the expulsive action of the uterus. After labor, it will be found effectual in allaying the general excitement of the nervous system and relieving after-pains.

In large doses it produces vertigo, impaired vision, nausea, vomiting, and a reduction of the circulation, but no alarming narcotic effects. Green tea is said to counteract its narcotic influences.

It is used in the debility of females attendant upon uterine disorder, and in its action is thought to have an especial affinity for that organ. Dr. Hildreth has found this plant, in combination with iodine, very advantageous in the early stages of phthisis. Barton employed it as an astringent, which property it owes to the gallic acid it contains. He gave it in putrid sore-throat.

According to Mr. Tilghman, it contains gum, starch, sugar, resin, wax, tannin, gallic acid, salts of potassa, lime, iron, magnesia, &c.

Many encomiums have been passed upon the cimicifuga as a remedy in *chorea.* Several cases of this disease, reported by Dr. Jesse Young to have been cured, were published some years ago. Dr. Wood states that he administered it in a case of chorea, which rapidly recovered under its use, after the failure of purgatives and metallic tonics. He also remarks that he had derived the happiest effects from it in a case of convulsions, occurring periodically, and connected with uterine disorder. Dr. Kirkbridge always purges before he uses it; and general frictions with salt or the flesh-brush, and pustulation with croton oil over the spine, he believes to be of much value in chronic cases.

Dr. Johnson found the most acute and severe cases of rheumatism yield to its influence, not only more speedily, but more perfectly, and with less danger of metastasis to other organs than to any other form of treatment.

Dr. E. G. Wheeler affirms that he has found it useful in several cases of severe and protracted cough, especially in the chronic cough or bronchitis of old people.

In the *Western Lancet* are reported half a dozen cases of neuralgia, successfully treated by the tincture of cimicifuga. The writer of the article says:—"To secure the prompt therapeutic action of the cimicifuga it would appear important to relieve the alimentary canal of saburral secretions, and, so far as possible, remove all iregularities of the circulating fluid. I do not know that its action tends in any manner to increase febrile reaction when present, nor to produce local determination to any particular organ; but, on the contrary, I am strongly inclined to believe, from my observations on the effects of this article, that it acts as a sedative to the heart's action. When excessive repletion or preternatural excitement of the heart and arteries is present, the constitutional action of the remedy was not manifested until these conditions were removed. Neither did it act in subverting the disease. When I am now called upon to treat an idiopathic nervous affection, I prepare the system for the use of cohosh, in the same manner as if I was going to administer quinine, to which I am strongly disposed to think it is related in its manner of action upon the nervous system. When the system is thus prepared, in idiopathic attacks of neuralgia, I place more reliance in the above-mentioned article than any other in the materia medica. It is the nervous element of disease upon which the cimicifuga achieves its most salutary effects, and will be successful in controling morbid action going on in that system, in proportion as it is complicated."

Its powers in rheumatic affections, and in anasarca, are greatly increased by administering it in the following combination:—

Tincture of cimicifuga, - - - - - -	1 ounce.
Iodide of potassium, - - - - - -	2 drams.
Syrup of ipecac, - - - - - - -	1 ounce.
Spring water, - - - - - - -	2 ounces.

Mix. Give a teaspoonful three or four times a day.

In chronic bronchial disease, and in the early stage of phthisis, it has been proved to be an excellent and efficient remedy when combined with an anodyne and the tincture of bloodroot.

Tincture of cimicifuga, - - - - - -	1 ounce.
" " sanguinaria, - - - - -	1 "
Sulphate of morphia, - - - - - -	2 grains.
Syrup of gum arabic, - - - - - -	2 ounces.

Mix. Give a teaspoonful when the cough is troublesome.

In the treatment of dropsy, the following is a preferred prescription, and has been employed much by an experienced practitioner in Massachusetts:—

Tincture of cimicifuga, - - - - - -	1 ounce.
" " myrrh, - - - - - -	6 drams.
Laudanum, - - - - - - - - -	1 dram.
Tincture of red pepper, - - - - -	1 "

Mix. Take thirty or forty drops three times a day.

CIMICIFUGIN (*the Resinoid Principle of the Cimicifuga Racemosa*).—Tonic, alterative, nervine, anti-periodic, with an especial affinity for the uterus. It does not possess the narcotic properties of the root, which, however, are preserved in the dried hydro-alcoholic extract, or the ethereal extract. Used in intermittent fevers, periodic diseases, leucorrhea, amenorrhagia, dysmenorrhea, amenorrhea, sterility, rheumatism, scrofula, and prolapsus uteri, not accompanied with an inflammatory condition of that organ or its ligatures. It has also been used in gleet, gonorrhea, and dyspepsia, while the tincture has been found an excellent application in chronic ophthalmia.

Prof. T. V. Morrow's use of this resinoid in cases similar to those which he successfully treated with the cimicifuga, justify him in the conclusion that it is a satisfactory substitute.

The cimicifugin is also a most valuable medicine, especially as an adjunct to other remedies, in all pulmonary, rheumatic and dyspeptic symptoms, where there is a want of tone in the nervous system.

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From the London Pharmaceutical Journal.

The Arsenic Eaters of Styria.

By CHARLES HEISCH, Lecturer on Chemistry at Middlesex Hospital.

At the last meeting of the Manchester Philosophical Society, I observe that Dr. Roscoe called attention to the arsenic eaters of Styria. Having for the last two years been in communication with the medical men and other residents in the districts where this practice prevails, I shall feel obliged if you will allow me, through your journal, to make known the facts I have at present collected. The information is derived mainly from Dr. Lorenz, Imperial Professor of Natural History, formerly of Salzburg, from Dr. Carle Arbele, Professor of Anatomy in Salzburg, and Dr. Kottowitz, of Neuhaus, besides several non-medical friends. If human testimony be worth anything, the fact of the existence of arsenic eaters is placed beyond a doubt. Dr. Lorenz, to whom questions were first addressed, at once stated that he was aware of the practice, but added that it is generally difficult to get hold of individual cases, as the obtaining of arsenic without a doctor's certificate is contrary to law, and those who do so are very anxious to conceal the fact, particularly from medical men and priests. Dr. Lorenz was, however, well acquainted with one gentleman, an arsenic eater, with whom he kindly put me in communication, and to whom I shall refer again more particularly. He also says that he knows arsenic is commonly taken by the peasants in Styria, the Tyrol, and the Salzkammergut, principally by huntsmen and woodcutters, to improve their wind and prevent fatigue. He gives the following particulars:—

The arsenic is taken pure in some warm liquid, as coffee, fasting, beginning with a bit the size of a pin's head, and increasing to that of a pea. The complexion and general appearance are much improved, and the parties using it seldom look as old as they really are; but he has never heard of any case in which it was used to improve personal beauty, though he cannot say that it never is so used. The first dose is always followed by slight symptoms of poisoning, such as burning pain in the stomach and sickness, but not very severe.

Once begun, it can only be left off by very gradually diminishing the daily dose, as a sudden cessation causes sickness, burning pains in the stomach, and other symptoms of poisoning, very speedily followed by death.

As a rule, arsenic eaters are very long lived, and are peculiarly exempt from infectious diseases, fevers, &c.; but unless they gradually give up the practice, invariably die suddenly at last.

In some arsenic works near Salzburg, with which he is acquainted, he says the only men who can stand the work for any time are those who swallow daily doses of arsenic, the fumes, &c., soon killing the others. The director of these works, the gentleman before alluded to, sent me the following particulars of his own case. (This gentleman's name I suppress, as he writes that he does not wish the only thing known about him in England to be the fact that he is an arsenic eater; but if any judicial inquiry should arise which might render positive evidence of arsenic eating necessary, his name and testimony will be forthcoming.)

"At seventeen years of age, while studying assaying, I had much to do with arsenic, and was advised by my teacher, M. Bönsch, professor of chemistry and mineralogy at Eisleben, to begin the habit of arsenic eating. I quote the precise words he addressed to me: 'If you wish to continue the study of assaying, and become hereafter superintendent of a factory, more especially of an arsenic factory, in which position there are so few, and which is abandoned by so many, and to preserve yourself from the fumes which injure the lungs of most, if not of all, and to continue to enjoy your customary health and spirits, and to attain a tolerably advanced age, I advise you—nay, it is absolutely necessary, that besides strictly abstaining from spirituous liquors you should learn to take arsenic; but do not forget, when you have attained the age of fifty years, gradually to decrease your dose, till from the dose to which you have become accustomed you return to that with which you began, or even less.' I have made trial of my preceptor's prescriptions till now, the forty-fifth year of my age. The dose with which I began, and that which I take at present, I enclose; they are taken once a day, early, in any warm liquid, such as coffee, but not in any spirituous liquors." The doses sent were No. 1, original dose, three grains; No. 2, present dose, twenty-three grains of pure white arsenic, in coarse powder. Dr. Arbele says this gentleman's daily dose has been weighed there also, and found as above. Mr. ——— continues:—"About an hour after taking my first dose (I took the same quantity daily for three months), there followed slight perspiration with griping pains in the bowels, and after three or four hours a loose evacuation; this was followed by a keen appetite, and a feeling of excitement. With the exception of the pain, the same symptoms follow every increase of the dose. I subjoin, as a caution, that it is not advisable to begin arsenic eating before the age of twelve, or after thirty years." In reply to my question, if any harm results from either interrupting or altogether discontinuing the practice, he replies: "Evil consequences only ensue from a long-continued interruption. From circumstances I am often obliged to leave it off for two or three days, and I feel only slight languor and loss of appetite, and I resume the arsenic in somewhat smaller doses. On two occasions, at the earnest solicitations of my friends, I attempted entirely to leave off the arsenic. The second time was in January, 1855. I was induced to try it a second time, from a belief that my first illness might have arisen from some other cause. On the third day of the second week, after leaving off the dose, I was attacked with faintness, depression of spirits, mental weakness, and a total loss of the little appetite I still had; sleep also entirely deserted me. On the fourth day I had violent palpitation of the heart, accompanied by profuse perspiration. Inflammation of the lungs followed, and I was laid up for nine weeks, the same as on the first occasion of leaving off the arsenic. Had I not been bled, I should most likely have died of apoplexy. As a restorative, I resumed the arsenic eating in smaller doses, and with the firm determination never again to be seduced into leaving it off, except as originally directed by my preceptor. The results on both occasions were precisely the same, and death would certainly have ensued had I not resumed arsenic eating." One of the most remarkable points in this narrative is that this gentleman began with a dose which we should consider poisonous. This is the only case of which I have been able to obtain such full particulars, but several others have been mentioned to me by those who the knew parties, and can vouch for their truth, which I will briefly relate.

One gentleman, besides stating that he is well aware of the existence of the practice, says he is well acquainted with a brewer in Klagenfurth, who has taken daily doses of arsenic for many years. He is now past middle life, but astonishes every one by his fresh, juvenile appearance; he is always exhorting other people to follow his example, and says: "See how strong and fresh I am, and what an advantage I have over you all! In times of epidemic fever or cholera, what a fright you are in, while I feel sure of never taking infection."

(To be concluded in our next.)

Calendula Officinalis.

(*Pot Marigold.*)

By Dr. H. G. Lungren, of Brooksville, Florida.

I have had occasion to use the preparations of this little garden flower in severe cuts, bruises and sprains, from the recommendation given of its virtues by an old German practitioner residing in North Carolina; and I must state that I have always used it with the utmost success. From what I can learn from the old doctor, it is considered a great domestic remedy in Germany. The old housewives gather it every year with the utmost regularity; and a part of the garden is annually set aside for this plant.

They collect the plant while in flower, and carefully dry it, and from this dried plant they make a home-made tincture with brandy, though by far the most common mode of preparation is infusion and watery extract. By the Germans this remedy is a "sovereign balm."

As every one knows this plant, having seen it growing in almost every garden, or tasted it in soup, &c., I shall not offer a botanical description, but will go on to state the mode of preparation, the supposed medical virtues, and also give a few cases in which I have used it.

This remedy can be used in any kind of bruise or cut, but its effects can best be seen in incised, punctured or lacerated wounds, and those with a considerable loss of substance. One very remarkable quality is its control over the process of granulation and cicatrization; it seems to prevent suppuration—that is, to a great extent—and to force granulation and cicatrization.

In cases of amputation where it seemed impossible to regulate suppuration, and this remedy was employed, it acted well; the cure was effected by *prima intentione*, and the amount of suppuration was comparatively insignificant.

John B., aged ten years, fell down a high flight of stairs. Under lip much lacerated and bruised; severe contusion on the nose and forehead. Wound on the lip was brought together with adhesive plaster (over which tincture of calendula was applied), and over this a compress was placed soaked in water containing one ounce of the tincture of calendula to one pint of water. This was applied for three days. At the end of that time cicatrization set in without suppuration. Hardly any scar left.

Michael P., a laborer—case of complicated fracture of the leg, with large wound several inches in length, from which the tibia was laid bare. Fracture was set all right. Ordered one ounce of the tincture of calendula in sixteen ounces of ice water, for an application. This case made a speedy cure, and and but little or no pus was discharged.

This remedy has been used by the homœopathists, and is considered a great thing in their practice; but, aside from its valuable properties of healing up wounds, and as an application to bruises, &c., I don't know of its ever having been useful in medicine. Its *supposed virtues* are emmenagogue, alterative, and anti-spasmodic. I think its mucilaginous properties might, however, be turned to account in low fevers.

The mode of preparing a tincture of this plant is to collect at the period of flowering those half open buds with which the plant is often almost covered, and dry them in the shade, crush them in a mortar, and take two ounces of them to sixteen ounces diluted alcohol; macerate a week or fortnight, and express and filter. To make the application for wounds, &c., use one ounce of the tincture to a pint of ice cold water. The distilled water has been used with success.—*Druggists' Circular.*

Kamela (Rottlera Tinctoria).

ITS HISTORY, PROPERTIES, MEDICAL USES, DOSES, &C.

History.—This plant was known to the Hindoos from the remotest antiquity, the fruit of which was employed by them as a remedy for worms, and also in certain skin diseases. They likewise used it for dying and printing silks, &c., but for this purpose it underwent a chemical process, viz: an alkaline solution was mixed with the powder of the fruit, which yielded a beautiful orange-brown color. But its properties have only recently been demonstrated by Drs. Anderson and Mackinnon, who first introduced it into England. Kamela belongs to the natural order *Euphorbiacea.* It grows abundantly on the hilly districts of India, Burmah, the Philippine Islands, and the north-east portions of Australia. Its fruit ripens in February and March, when it is gathered, and the powder, which appears as an excrescence, is carefully brushed off and preserved for use.

Properties.—The powder of kamela is of a red brick color, with little or no odor and flavor, and like lycopodium it is difficultly miscible with water. Ether extracts a quantity of its resinous components, and if the solution be allowed to stand for a few days a precipitate of granular crystals is formed, which, when purified, is seen to consist of small scales of a yellowish color and satiny lustre, and named by Dr. Anderson rottlerine. Alcohol extracts its medicinal constituents most perfectly, and the tincture made with rectified spirit is found to be very suitable for administration. Its formula, on analysis, is found to be C_{22}, H_{10}, O_6. Its composition is as follows:—

Resinous coloring matter,	78.19
Albuminous substances,	7.34
Cellulose, &c.,	7.12
Carbon,	3.86
Water,	3.49
Volatile oil,	trace.
Volatile coloring matter,	"
Total,	100.00

Medical Uses.—Kamela has been successfully given in cases of tænia, and Dr. Mackinnon considers it of much greater value in those cases than either kousso or turpentine. Dr. Anderson describes "ninety-five cases of tænia, in ninety-three of which the worms were expelled after the third or fourth dose." It has been used also with very great success for tape-worm and ascarides by Dr. Arthur Leared, of the Great Northern Hospital, and by Dr. Wm. Moore, of Dublin. The *Lancet*, of May 15th, 1858, records six cases of cure of tape-worm by Dr. Ramskill, of the Royal Free Hospital. In some instances sickness, headache and purging are produced by it, but generally its administration is attended by no unpleasant result.

Dose.—In powder, the dose of this remedy is from one to three drams early in the morning, fasting. The tincture* may be given in doses of from one to two drams, night and morning, on lump sugar.—*Chemist and Druggist, London, March* 19, 1860.

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Bi-Tartrate of Potassa in the Treatment of Menorrhagia.

By J. A. Chambers, M. D.

My attention was directed to the use of the above remedy, in 1848, by a communication published in *Ranking's Half-Yearly Abstract of the Medical Sciences*, from Dr. Sylvester. Former experience teaching me the inefficacy of the usual remedies in the treatment of menorrhagia, I determined to use it upon the authority given, when opportunity offered, knowing its inability to do *harm, if not beneficial.*

I may state that you may class me among the old fogies in medicine in this respect. I love the noble profession of medicine and appreciate its improvements, but am not one of those whose enthusiasm lead them to jump at the discovery of new remedies, especially when they are energetic in their action in the treatment of disease. Remedies powerful in their action upon the human system must inevitably do harm, if no good. Therefore, *ample testimony* should only justify a physician, in *private* practice, in using them, unless as a last resort.

Believing, as I have said, in the inability of the remedy to produce harm, if no good, in such cases, I commenced the use of it in menorrhagia, and have continued its administration, when my judgment dictated its necessity, for the last twelve years, with greater success than with any one known remedy in that disease. Its action is rational, and conjoined with rest in the horizontal position, diet regulated in accordance to circumstances, with perfect quiet of mental as well as physical exertion, its effects are beneficial and speedy.

I will give the following case of recent occurrence:—Was called on the 7th of this month (June) to see Mrs. J. C., age about forty, the mother of nine children, the youngest three years old. Has menstruated regularly up to October last, since which time she has been irregular and *hrofuse;* sufficiently so to make its inroads upon her constitution. She was pale and exsanguined when I saw her, discharging freely for the last five weeks. Thinking that it was kept up by a want of tone in the muscles of the uterus, and its inability to contract, I prescribed teaspoonful doses of vinum ergota, repeated four or five times in the twenty-four hours, promising to call in two days. Upon my return, I ascertained that the discharge had increased, if any difference. Her bowels being very costive, I prescribed the bi-tartrate with a two-fold object: to remove costiveness and check the discharge. I directed her to take three teaspoonsful of the medicine, and put it in a sufficient quantity of boiling water to dissolve it, adding sugar sufficient to make it palatable, to let it cool, and drink the quantity in twenty-four hours; when that was gone, to use more in the same way. She did as directed, and in thirty-six hours was entirely relieved; since which time I have heard of no recurrence of it. This is but one case out of numbers in which it has thus acted.—*St. Joseph Journal of Medicine and Surgery.*

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* Tincture of kamela is made by macerating half a pound of powder of kamela for fourteen days in a pint of rectified spirits of wine.

Action of Different Medicines on the Mental Faculties.

By Professor Otto.

All stimulant and exciting medicines increase the quantity of blood that is sent to the brain. If this quantity exceeds a certain amount, then most of the faculties of the mind become over-excited. Nevertheless the degree of this action is observed to vary a good deal in different cerebral organizations; and it is also found that certain stimulants exercise a peculiar and characteristic influence upon special or individual faculties. Thus ammonia and its preparations, as well as musk, castor, wine, and ether, unquestionably enliven the imaginative powers, and thus serve to render the mind more fertile and creative. The empyreumatic oils are apt to induce a tendency to melancholy, and mental hallucinations. Phosphorus acts on the instinct of propagation, and increases sexual desire; hence it has often been recommended in cases of impotence. Iodine seems to have a somewhat analogous influence; but then it often diminishes, at the same time, the energy of the intellectual powers. Cantharides, it is well known, are a direct stimulant of the sexual organs; while camphor tends to moderate and lull the irritability of these parts.

Of the metals, arsenic has a tendency to induce lowness and depression of the spirits; while the preparations of gold serve to elevate and excite them. Mercury is exceeding apt to bring on a morbid sensibility, and an inaptitude for all active occupation.

Of narcotics, opium is found to augment the erotic propensities, as well as the general powers of the intellect, but more especially the imagination. Those who take it in excess are, it is well known, liable to priapism. In smaller doses it enlivens the ideas and induces various hallucinations, so that it may be truly said that, during the stupor which it induces, the mind continues to be awake while the body is asleep. In some persons opium excites inordinate loquacity. Dr. Gregory says that this effect is observed more especially after the use of the muriate of morphia. He noticed this effect in numerous patients, and he then tried the experiment on himself with a similar result. He felt, he tells us, while under the operation, an invincible desire to speak, and possessed, moreover, an unusual fluency of language. Hence he recommends its use to those who may be called upon to address any public assembly, and who have not sufficient confidence in their own unassisted powers.

Other narcotics are observed to act very differently on the brain and its faculties from opium. Belladonna usually impairs the intellectual energies; hyoscyamus renders the person violent, impetuous and ill-mannered. Conium dulls and deadens the intellect, and digitalis is decidedly anti-aphrodisiac. Hemp will often induce an inextinguishable gaiety of spirits; it enters into the composition of the intoxicating drink which the Indians call *bauss*. The use of the *amanita muscaria* is said to have inspired the Scandinavian warriors with a wild and ferocious courage. Tobacco acts in a very similar manner with opium, even in those persons who are accustomed to its use: almost all smokers assert that it stimulates the powers of the imagination.

If the psychological action of medicines were better known medical men might be able to vary their exhibition, according to the characters and mental peculiarities of their patients. The treatment of different kinds of monomaniacal derangement also might be much improved; and it is not improbable but that even a favorable change might be wrought on certain vicious and perverse dispositions, which unfortunately resist all attempts at reformation, whether in the way of admonition, reproof, or even of correction."—*Zeitschrift für die Gasamante Medicin, and Medico-Chirurgical Review.*

Selections.

Caffein as an Antidote to the Poisonous Effects of Opium.—Prof. Henry Fraser Campbell, of Georgia, in the *Southern Med. and Surg. Journal*, for May, 1860, publishes an article on this subject. After giving some account of caffein, and the use of coffee as an excitant, he describes the patient as a young man, 24 years old, who had, in a fit of mental depression, swallowed an ounce and a half of laudanum, nearly an hour before his visit—8 o'clock P. M. Narcotism had proceeded so far that emetics could not be employed; the muscles were greatly relaxed, the tongue falling back in the mouth and tending to stop respiration, and respiration exceedingly feeble. Cold water was applied to the head for a time, artificial respiration resorted to, and the stomach pump then vigorously applied. At 12 o'clock P. M. the case seemed more hopeless, respirations *but four to the minute*. Artificial respiration, in a sitting posture, was then resorted to, which seemed to have a temporary good effect. Dr. Campbell then thought of coffee, but the patient could not swallow, and he doubted the propriety of using the stomach tube in the then condition of the patient. Finding it difficult to get a strong infusion of coffee, the idea of employing caffein occurred, and having dissolved twenty grains in a quantity of infusion of coffee, it was administered as an injection by means of a syringe. In half an hour the respirations were eight per minute. An hour had not elapsed before he "*forcibly jerked his left arm from the assistant,*" and told them "to let him alone." The narcotism slowly passed off, and at 10 o'clock next day, when Dr. Campbell called, the patient had left the hotel and gone home. Although the effects of the narcotism was apparent for several days, they soon wore off, and the patient entirely recovered. Dr. Campbell believes that the caffein in this case was largely concerned in the recovery, and points to that alkaloid as probably possessing valuable antidotal powers in cases of narcotic poisoning from this drug.—*American Journal of Pharmacy.*

Obstinate and Violent Neuralgia of the Uterus Promptly Relieved by the Hydrochlorate of Ammonia.—E. J. Fountain, M. D., of Davenport, Iowa, writes to the *Cincinnati Lancet and Observer*, for July, as follows:—"Three weeks after confinement, Mrs. E—— began to experience irregular neuralgic pains through the pelvis, which in a few days manifested all the peculiarities of uterine neuralgia. It gradually increased in severity, until in about a week the suffering became excruciating, and resisted every method of treatment ordinarily followed in such cases. In order to obtain some freedom from pain, and rest at night, she took large quantities of morphine and tincture opii, with only partial relief; and as soon as the effect of the opiate passed off the pain would return with increased severity. After this extreme suffering for six or seven days, the lady seemed on the verge of insanity. Recollecting an account of a case of facial neuralgia promptly arrested by the muriate of ammonia, published in *Braithwaite's Retrospect*, I concluded to give it a trial in this case. I ordered half a dram to be taken every hour, until some effect should be produced. She began to feel some relief shortly after the first dose—still more after the second; and the third dose removed every vestige of pain, and she dropped into a natural and refreshing sleep, the first she had enjoyed for ten or twelve days. She continued taking the preparation for several days, three times each day, in gradually diminishing doses, and had not the slightest return of the difficulty."

Anti-Lactescent Properties of Belladonna.—"By frequent and successful trials of this article," writes Dr. E. J. Fountain, of Davenport, Iowa, to the *Cincinnati Lancet and Observer*, for July, "I have long since been perfectly satisfied that it possesses the property above indicated. I believe this is now generally acknowledged by the profession; but if any are yet skeptical, the following singular case will, I think, remove all doubt on the subject:—I was recently consulted by Mrs. H——, on account of a long-continued secretion of milk, which she was unable to arrest. Three years previously she had been prematurely delivered of a still-born child, and from that time to the present milk was constantly and abundantly secreted in each breast, and she was obliged to milk it out or have it drawn out every day. Ocular demonstration was furnished me of the truth of her statement relating to the quantity of milk. She informed me that for *three years* she had tried every method she or her friends had heard of to arrest it, but all to no purpose: it was still as abundant and troublesome as ever. I immediately gave the following prescription, which I find to be about the best form of using the belladonna in such cases:—Extract belladonna, ung. glycerine, *aa.* ℥ ij. Mix. To be rubbed freely over *all* the breast, and covered with oil-silk to protect the clothing. By the time this was all used, less than a week, the secretion of milk was entirely arrested, and has not since returned."

Nux Vomica in Neuralgia.—M. Roclants, a Dutch physician, reports most favorably of the effects of this potent drug in severe cases of neuralgia of the face and other parts, and communicates at the same time the therapeutic results obtained by many of his professional friends. Out of twenty-nine severe cases a perfect cure was effected in twenty-five, and decided relief was afforded in the other four. The dose, in which the powdered nux vomica was administered, was from three to ten grains, and upwards, in the course of the twenty-four hours. In all cases its effects should be narrowly watched, as unpleasant consequences have occasionally resulted from incaution on the part of the physician. M. Roclants is inclined to regard the nux vomica as, on the whole, the most efficient and certain remedy against severe neuralgia; he has seen several cases which had resisted the prolonged administration of steel, bark, and all the other approved means, yield to its use. M. Trousseau has recently been very strongly recommending the strychnos as a most valuable remedy in obstinate chorea.—*Medico-Chirurgical Review.*

Utility of Musk in Certain Cases of Delirium.—It is M. Recamier, we believe, who has most strongly advocated the use of this powerful antispasmodic in certain forms of delirium, occurring in the course of various febrile and inflammatory diseases. When pneumonia, as in certain constitutions, and in certain epidemics, is accompanied with marked symptoms of cerebral disturbance—a very embarrassing complication—the use of musk, either alone or in combination with calomel, has been often found to be of decided advantage. It is also very useful in the delirium which not unfrequently attends the course of erysipelas, and several other exanthemata; more especially in small-pox, during the maturation and desiccation of the eruption. Dr. Roche, of Strasbourg, has recently published several very instructive cases in illustration of this practical point. The first was one of erysipelas of the face and head; the second of gangrenons sore-throat; the third of scarlatina; and the fourth of variola. In all these the musk appears to have acted very beneficially. He adds: "I have employed it also in two cases of furious mania; the violent agitation was arrested, but no other good was produced. It completely failed in a case of grave typhoid fever, and also in one of acute bronchitis, accompanied with delirium, which occurred in a middle-aged man of very intemperate habits." He closes his observations with the following general remarks:—"It appears to me that the administration of musk is indicated whenever, in the course of acute diseases, delirium supervenes without any distinctly appreciable cause, and the severity of which is not commensurate with that of the primary disease. In very many cases I have had the satisfaction of witnessing cures, which I could not certainly have anticipated before my acquaintance with this most valuable remedy. The first effect which it usually produces when successful is to induce a quiet refreshing sleep, and a general tranquilizing influence over the entire body; sometimes it induces slight nervous twitchings in the eyelids, the extremities, &c."—*Jour. des Connaiss. Med. Chir., and Medico-Chirurgical Review.*

POMADE FOR CHAPS AND FISSURES OF THE TOES.—One of the most annoying effects of secondary syphilis is the formation of fissures on the internal surface of the toes; they are usually very painful, are surrounded with a red areola, and secrete a syphilitic matter. In a few cases gangrene has been known to supervene, and to destroy one toe after another. An ointment, containing litharge, white precipitate, and a few drops of laudanum, has been used with very marked success in such cases in many of the hospitals of Germany. It is also much recommended in the serpiginous and phagedænic ulcers which occasionally supervene upon vaccination in children of a scrofulous or syphilitic constitution. The process of cicatrization is often promoted by bathing the sores, at the same time, with a decoction of hemlock and marsh mallows.—*Ibid.*

From the American Druggists' Circular, for July.

SOOT IN CANCER.—M. Debreyne states that of all local applications capable of acting upon open cancer in an efficacious way, soot, in the form of ointment or lotion, is the best, owing to its detersive, plastic and regenerative properties. He employs the following ointment:—Lard and soot, of each sixty parts; extract of belladonna, eight parts. Glycerine may be advantageously substituted for the lard. M. Debreyne, regarding the action of the soot as special, suggests its internal use in the form of tincture or extract.—*Revue Médicale.*

PROTO-IODIDE OF MERCURY IN SYPHILIS.—Prof. Sigmund, of Vienna, states that he uses this preparation less and less, for as the result of his employment of it he finds: 1. That its reputed peculiarity of not inducing salivation, whether given alone or with opium, is groundless. 2. It gives rise to diarrhea, even when combined with opium. 3. It is only applicable to certain forms of syphilis, the papular and pustular, and even in these it requires more time to take effect than do other mercurial preparations. 4. In obstinate forms of the disease it is of little or no use, while in anæmia it is positively injurious. 5. It by no means deserves the preference given to it in the treatment of children; and if these are anæmic or inclined to diarrhea it is hurtful. 6. It only deserves a trial when combined with iodide of potassium in some obstinate forms, but not in subjects disposed to catarrh of the lungs, stomach or intestines.—*Wien Wochenschrift, and Medical Times and Gazette.*

ALCOHOLIC TINCTURE OF ALOES AS A REMEDY FOR BLENORRHŒA.—This new remedy is proposed by Dr. Gamberini, a distinguished practitioner at Boulogne. A young man under his care had been afflicted for some months with a discharge, which injections of sulphate of zinc, ergotine, and per-chloride of iron had diminished to only a very slight extent. Dr. Gamberini then prescribed three injections a day of the following mixture:—Alcoholic tincture of aloes, 16 grammes; water, 120 grammes. At the end of a fortnight all trace of the discharge had completely disappeared. The use of this topical application was attended with no other inconvenience than a slight momentary smarting. Similar encouraging results have attended the use of this remedy in several other cases.—*Revue de Ther.*

PROPYLAMIN NOT A NEW REMEDY.—An old book, called "Wonderfull Secrets of Medicine," gives the following recipe:—"For rheumatic pains take some of the oil that swims on the top of a cask of pickled salmon, and rub it on the parts affected, and in two or three days' application it will effect a cure."

ANTIDOTE TO STRYCHNIA.—Dr. Bewley, wishing to kill a mangy cur, and having read in Magendie's "Report on Strychnia" that the sixteenth of a grain will kill the largest dog, determined to make sure of this very little animal by giving it about half a grain. But either Magendie's statement was incorrect, or the drug was adulterated, for at the end of ten minutes the dog, though suffering frightfully, was not dead. Dr. Bewley resolved to put him out of his misery at once, and accordingly mixed half a dram of prussic acid with a little milk, and put it under the dog's snout. He lapped the milk with avidity, and in less than a minute vomited, got upon his legs, ran away, and recovered.—*Medical Times and Gazette.*

LAUDANUM IN WEAK VISION OF THE AGED.—Prof. Nascar, of Naples, says that in cases of aged persons whose sight is becoming enfeebled and requires the aid of convex glasses, great advantage is derived, supposing no nervous lesion exists, from painting every evening the eyelids and brow with laudanum, and allowing this to remain on all night.—*Med. Times and Gazette.*

ECZEMA OF THE HANDS.—M. N. Guillot, of the Necker, employs the following ointment with success in the treatment of eczema of the hands:—Lard, thirty parts; sub-carbonate of soda, oil of cade, tar, of each two to four parts.—*Gazette des Hôpitaux.*

Pharmacy.

LIQUOR FERRI PERACETATIS.

By William Procter, Jr., of Philadelphia.

A tincture of acetate of iron has long been known as an officinal of the Dublin Pharmacopœia, made by double decomposition, between alcoholic solutions of the ter-sulphate of iron and of acetate of potassa.

Recently, Dr. W. R. Basham, of Westminster Hospital, London, in the *Lancet*, of June 28, 1860, has suggested a new form of acetate of iron, which he has found to answer remarkably in many other cases where other preparations of iron have disagreed with the patient, or have excited disgust. This solution is made from the officinal tincture of the chloride of iron and solution of acetate of ammonia, and was brought to my notice by Dr. John F. Meigs, who has frequently prescribed it.

℞.—Tinct. of chloride of iron (U. S. P.),.......	3 fluid drams.
Solution of acetate of ammonia,...........	3 fluid ounces.
Syrup of orange peel (or other syrup),....	1 " "
Acetic acid,..........................	10 minims.

Mix. Of this solution the dose is a dessert-spoonful three or four times a day.

The chemical affinities result in the formation of peracetate of iron and muriate of ammonia, with an excess of acetate of ammonia. Its impression on the palate, though astringent, is but slightly ferruginous, and has none of the inky taste of the chloride. When made without the free acetic acid, the solution undergoes change much sooner than with it. The preparation has the deep ruby red color of a solution of acetate of iron, and has a tendency to change by keeping. To give greater permanency, and a more agreeable taste, I have, after a variety of experiments, adopted the following formula as worthy of acceptance:—

LIQUOR FERRI PERACETATIS.

℞.—Acetic acid,...........................	5 fluid ounces.
Carbonate of ammonia (pure),.............	q. s.
Tincture of chloride of iron (U. S. P.),.....	4 fluid ounces.
Curaçoa,...............................	4 " "
Ginger syrup,............................	1 pint.

Reserve a fluid dram of the acetic acid, and saturate the remainder with the carbonate of ammonia, then add the acetic acid and tincture of chloride of iron, and mix them. Lastly, add the other ingredients.

This solution is about one-third stronger than the other solution, and may be given in the dose of a teaspoonful to a dessert-spoonful, mixed with a little water, three times a day, for an adult, after meals.

The proportion of sesquioxide of iron contained in this solution is three-quarters of a grain to the teaspoonful, or six grains to the fluid ounce; a dessert-spoonful is equal to sixteen minims of the tincture of chloride of iron, as regards its iron strength. The curaçoa cordial may be substituted by any other suitable flavoring, except such as contain astringents, which of course will blacken the preparation. A sweetened tincture of recent orange peel, slightly aromatized with canella and oil of coriander or caraway, may be used.

This preparation has proved to be a valuable tonic and diuretic. Dr. Basham recommends it very highly in renal dropsy. Dr. John F. Meigs has found it particularly serviceable in cases of children requiring a ferruginous tonic. The presence of the muriate of ammonia no doubt has a modifying influence, as well also as the small excess of acetate of ammonia. Dr. Keating has derived valuable diuretic effects from it in cases of albuminuria. In a case of dropsical effusion attendant on heart disease, with great debility, its tonic action was decidedly efficient, proving acceptable to the stomach when other preparations had occasioned disgust.—*Amer. Jour. of Pharm.*, *July*, 1860.

SPECIES ST. GERMAIN.

By Wm. Procter, Jr., of Philadelphia.

This compound of senna and aromatics is considerably used in Philadelphia, and perhaps elsewhere. The following receipt for it is found in "Redwood's Supplement to the Pharmacopœia," translated for the Prussian Pharmacopœia:—

SPECIES LAXANTES ST. GERMAIN; SPECIES PROTHEA ST. GERMAIN; ST. GERMAIN LAXATIVE POWDER.

Take of senna leaves, exhausted with spirit,	4	ounces.
" elder flowers,	2½	"
" fennel seeds, anise seeds, of each	1½	"

Well cut and bruise them, and mix together, and, when dispensing, add

Purified cream of tartar,	6	drams.

The dose of this powder is eighty grains, drank as an infusion.

The object of treating the senna with alcohol is to deprive it of odorous matter, and perhaps of some resinoid matter concerned in the production of griping. The spirit used should be alcohol (0.835). When the tincture from a pound (7,000 grains) of powdered senna is evaporated to an extract, it yields 1,440 grains, which has a dark green color and strong odor of senna. Whether it possesses the purgative properties of senna to any extent we do not know, but should doubt much its purgative value. On a recent occasion, a lady who habitually uses this preparation, and about to spend some time in Europe, was desirous to have it put up in the most convenient form. We suggested that a fine powder would be very convenient, as she could take her dose (of twenty grains) in substance, stirred in a wine-glassful of water, when it was not convenient to make the infusion. Another advantage of this form of the preparation is, that it may be dispensed in bulk by the ounce or pound, as the ingredients are uniformly mixed. The patient soon acquires by practice a knowledge of the dose by measuring with a spoon.—*Amer. Journal of Pharmacy, July,* 1860.

FLUID EXTRACT OF POLYTRICHUM JUNIPERINUM.

By Gustavus Dohme.

Take of	polytrichum juniperinum, in powder,	℥ viij.
"	alcohol,	q. s.
"	diluted alcohol (3 parts water, 13 parts alcohol),	q. s.

Mix the polytrichum juniperinum, in fine powder, with six ounces of alcohol, pack it firmly in a percolator, and, having placed over the surface a disk of cloth, gradually add alcohol until twelve ounces of tincture have passed; set it aside in a warm place till reduced to six ounces; continue the percolation with diluted alcohol (thirteen parts alcohol, three parts water,) until the liquid passes tasteless. Evaporate the tincture thus obtained over a water-bath to one ounce, adding to it one ounce of alcohol, to redissolve the resinous matter, and mix with the concentrated reserved tincture, and filter if necessary.

As polytrichum juniperinum is of a spongy, bulky nature, which makes tight packing for the process of percolation very difficult, I found it to answer a good purpose to first pack it with the hand as tight as possible, then place over it a perforated tin and a sufficient weight to allow the percolation to go on slowly. In following this precaution, I was able to exhaust the mass with less menstruum than in percolating it without pressure.

The fluid extract made by the above process has a dark green color and strong odor characteristic of the herb, and representing it dram for dram.—*Jour. and Trans. of Maryland College of Pharmacy, June,* 1860.

IMPROVED FORMULA FOR AROMATIC SYRUP OF RHUBARB.

By Wm. S. Thompson.

Take of	rhubarb, in coarse powder, (No. 40),	3 ounces.
"	cinnamon, in powder, (No. 50),	
"	cloves, in powder, (No. 50), of each	½ ounce.
"	nutmeg, in powder, "	2 drams.
"	diluted alcohol,	q. s.
"	sugar, refined,	7 pounds.

Mix the cloves, cinnamon and nutmeg; moisten slightly with diluted alcohol, and transfer to a glass funnel, having previously inserted a conical-shaped piece of sponge into the upper part of the neck. Displace until until four fluid ounces have passed through, which reserve. Mix the rhubarb with an equal bulk of washed sand and the dregs of the aromatics; moisten slightly with diluted alcohol, transfer the whole to a displacer, and add, gradually, diluted alcohol until two pints have passed through, to which add half a pound of the sugar, and evaporate in a water-bath to one pint. Make a a syrup of the remainder of the sugar and two pints of water, add the evaporated tincture, boil for a few minutes, strain, and add the reserved aromatic tincture while it is still hot. The syrup should stand at 30° Baume while boiling hot.

In following the process of the Pharmacopœia of 1850 for this syrup, a large amount of the volatile portion of the aromatic ingredients is lost by long-continued heat in evaporation. By the process above recommended, this objection is entirely obviated, and the aroma uninjured. The object of adding a small portion of sugar to the tincture before evaporation is, that it may act as a deoxidizing agent, and prevent the formation of apotheme. The amount of alcohol retained in the syrup, being only two fluid ounces in about seven pints, is to small to form a reasonable ground for objection. The syrup prepared as above retains its transparency, and contains all the aromatic properties of the ingredients.—*Jour. and Trans. of Maryland College of Pharm.*

SYRUP OF IODOHYDRARGYRATE OF IODIDE OF IRON.

M. Chamoun (*Répertoire de Pharmacie*, May, 1860,) suggests the union of iron and biniodide of mercury in the forms of syrup and pill.

Take of biniodide of mercury,........................	1	grain.
" syrup of iodide of mercury,................	8000	grains.

Triturate the biniodide with a portion of the syrup until dissolved, and incorporate it with the remainder. There appears to be a combination between the two iodides.—*Amer. Journal of Pharmacy, July*, 1860.

CAMPHOR IN POWDER AND OINTMENT.

Camphor may be very easily powdered by contusion in a large marble mortar, adding a small quantity of water, and passing it through a hair or silk sieve, according to the degree of fineness required. When powdered in this manner the camphor never runs into lumps, even when kept a long time. To make a good ointment, three parts of camphor, so pulverized, should be melted by aid of a bath in twelve parts of prepared lard, and the mixture, as soon as it begins to be a little cold, should be stirred from time to time until it entirely sets—thus preventing the granular crystallization always observed in ointments which are allowed to set without stirring. This ointment preserves its smoothness and consistence for a year after its preparation.—*Jour. de Chimie Médicale.*

ANODYNE POMADE.

Take of Galen's cerate,..............................	31	parts.	
" extract of belladonna,......................	8	"	
" acetate of morphia (previously dissolved),......	3	"	M.

This pomade is exceedingly useful in cases of muscular pains, chronic rheumatism, &c., when rubbed on the affected parts.—*Medico-Chirurg. Review.*

Editorial.

AMERICAN PHARMACEUTICAL ASSOCIATION.—It will be remembered that when this Association adjourned at Boston, last September, it adjourned to meet in New York city on the second Tuesday of September, 1860. It is expected that this will be one of the largest meetings ever held of the Association; and, occurring at a time when apothecaries will desire to visit the city on business, they will be able to unite business and pleasure. We have no doubt they will receive at the hands of its resident members a liberal entertainment, and such attention as will not cause them to regret the effort, leaving out of the calculation the pleasure and profit they will receive from its discussions and deliberations.

HYPOPHOSPHITES.—In reply to correspondents, we state that in the next number we will give full formulæ for the various preparations of hypophosphites, as many of our correspondents have not met with the numerous formulæ published. The doses of the

Hypophosphite of lime is from...........	5 to 20 grains.
" " soda,.................	" "
" " iron,.................	" "

The syrup of hypophosphite of lime is prepared by Procter as follows:—

Take of Hypophosphite of lime, ...	1 ounce.
Water, ...	9½ fluid ounces.
White sugar, ...	12 ounces.
Fluid extract of vanilla, ...	½ fluid ounce.

Dissolve the salt in the water, filter, add the sugar, dissolve by aid of heat, and add the vanilla. The dose is from a teaspoonful (three and a half grains) to a tablespoonful (fourteen grains), according to the circumstances of the case, three times a day.

Syrup of Hypoyhosphite of Iron.

Take of Protosulphate of iron, ...	185 grains.
Carbonate of soda, ...	260 "
Hypophosphorous acid (sp. gr. 1.036), ...	f. ℥ iijss or q. s.
Water,	
Sugar, ...	12 ounces.

Dissolve the sulphate of iron and carbonate of soda, each separately, in four fluid ounces of water, and mix the solution. Wash the precipitated carbonate of iron thoroughly with sweetened water, and drain it on a muslin filter; then transfer to a dish, add a small portion of water, heat gently, adding hypophosphorous acid till it forms a clear solution; then add water till it reaches eight fluid ounces, add the sugar, and flavor to taste. This contains very nearly one grain of hypophosphite of protoxide of iron to the ounce.

Parrish's Syrup of the Hypophosphites.

The presence of preparations of iron in these compounds was not called for by the original discoverer of their therapeutic value, who considers the alkaline and earthy hypophosphites as superior to any of the ordinary "*hæmatogens*," and in practice I believe the following very simple preparations have been found fully equal to those in which iron is introduced with an excess of hypophosphorous acid:—

Take of Hypophosphite of lime,	℥ iss.
" soda,	℥ ss.
" potassa,	℥ ss.
Sugar (com.),	℔j, 12 oz.
Hot water,	Oj f. ℥ iv.
Orange-flower water,	f. ℥ j.

Make a solution of the mixed salts in the hot water, filter through paper, dissolve the sugar in the solution by the aid of heat, strain, and add the orange-flower water. Dose, a teaspoonful, containing nearly five grains of the mixed salts.

American Medical Times.—The publication of the *New York Medical Journal* is suspended, and in its place is issued a new weekly with the above title. It is a large double column journal, printed on excellent paper, and contains a variety of hospital reports, original communications, reviews, &c. The motives which have induced this change will be better learned from the extract we make from its announcement:—

> "Scientific medicine now partakes largely of that spirit of inquiry and restless activity which characterizes the age. In every department ardent and impulsive adventurers, with all the aids of modern invention, are enlarging the bounds of knowledge, and daily unfolding truths and principles of the greatest practical utility. These developments in the medical sciences are not now made at long intervals, but they are daily and almost hourly occurrences. He who maintains a familiar acquaintance with latest improvements, even in a single department of medicine, must, in our times, be a student of unremitting application. And not only is there an active spirit of inquiry and research in enlarging and more thoroughly exploring the domain of medical science, but our hospitals, the great repositories of accurate observation, and our schools, where these facts are reduced to systems and made available, are heartily co-operating in the great work of medical education and the diffusion of practical knowledge. This rapid development of every branch of medicine, and the increasing desire on the part of the profession at large for the earlier and more frequent dissemination of scientific intelligence, imperatively demands the co-operation of the metropolitan medical press.
>
> "These are some of the considerations which have led to the conclusion that this journal, by a change of form and more frequent issue, might be made far more condusive to the interests of the profession, both of the city and country. However well it may have been adapted to the period of its first publication, it cannot to-day, in its present form, faithfully represent New York, with her population increased three-fold, her numerous and well appointed hospitals, her flourishing schools of medicine, and her gradual centralization of medical interests. With a full knowledge of our increased responsibilities and labors, we have, with the sole object of rendering this journal in the highest degree useful to the profession, determined to exchange bi-monthly for weekly medical journalism. We are aware that other laborers have preceded us in this field, fruitful at least in harassing cares and constant toil, and we desire to be co-workers with them in the development of its resources."

It will be edited by Dr. Stephen Smith, Dr. Elisha Harris, and Dr. George F. Shrady, and is published by Balliere Bros., 440 Broadway, New York. Price $3 per year.

Subscribers will please notify us if they do not receive the Journal regularly.

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Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER IX.

FRASERA CAROLINENSIS, (*Walter.*)

(*American Columbo—Columbia—Indian Lettuce—Yellow Gentian—Golden Seal—Curcuma—Meadow Pride—Pyramid, &c.*) *Natural Order*, Gentianaceæ; *Linnean System*, Tetrandria—Monogynia.

THE American Colombo is one of our handsomest native plants, and the only one of its genus as yet discovered. It flourishes in the southern and western portions of the United States, especially in Arkansas and Missouri. In the western glades of Kentucky, Raffinesque states that he has seen it ten feet high, with a pyramid of crowded blossoms, four or five feet long. It is properly a triennial, though some botanists consider it a biennial; its stem and flowers only being produced in the third year, the radical leaves being the only part of the plant which previously appear above ground, and flowering from May to July. The root is to be collected in the spring of the third year, or the autumn of the second, cut into transverse slices like columbo, and dried.

The root of the Frasera is triennial, very large, weighing several pounds, yellow, rugose, spindle shaped and horizontal; the whole plant smooth, from five to ten feet high, cylindrical, and solid.

The *leaves* are sessile, verticillate, entire, the radical elliptical and obtuse, long; cauline ones smaller and narrower. The *flowers* are yellowish white, numerous, and form a large pyramidal panicle. The plant seems to have been first discovered by William Bartram, and dedicated to John Fraser, a well-known and indefatigable collector in this country towards the close of the last century. It is called *American Columbo*, from the resemblance of the root, when cut into transverse slices and dried, to the foreign columbo; also, from the similarity of its medical properties. When sliced horizontally, the root closely resembles that of gentian, to which it is botanically allied, belonging to the same botanical family.

Physical and Chemical Properties.—As found in the shops, the root, the officinal portion, is in pieces of an inch or more in thickness, and irregularly circular, somewhat shrunk in the middle, consisting of a central medullary matter, and an exterior cortical portion, of a yellowish color on the cut surfaces, with a light reddish-brown epidermis. It is distinguished from the foreign columbo by the greater uniformity of its internal structure, the absence of concentric and radiating lines, and their lighter and purer yellow, without a greenish tinge, and also, by affording a dark green precipitate with the salts of iron. Its taste is bitter and sweetish; its virtues are extracted by water and diluted alcohol. The tincture throws down a precipitate upon the addition of water, but is not disturbed by tincture of galls. The bitterness of this plant is much less intense than that of gentian.

The analysis of this root by Mr. Douglass, (*Am. Jour. Pharm.* vi. 177,) showed that it contained bitter extractive, gum, tannin, gallic acid, resin, a fatty matter, sugar, &c. But no accurate analysis of it seems to have been made previous to that of the Tilden's.

According to this, the dried root yields

		Per Cent.
Organic Matters, - - - -	6591.67	94.166
Inorganic " - - - -	408.32	8.834
Total, - - - - -	7000.00	100.000

		Per Cent.
Albumen, - - - - - - - -	81.12	1.158
Gum, - - - - - - - -	101.44	1.449

Coloring Matter,	805.92	11.513
Sugar,	256.00	3.657
Peculiar Principle,	1096.16	15.659
Fatty Matter,	249.00	3.428
Resin,	775.04	11.072
Soluble Salts,	145.92	2.084
Insoluble Salts,	262.40	3.750
Lignin, &c.,	3236.00	46.230
Total,	7000.00	100.000

The chemical tests of this root, already mentioned, all depend on the facts that columbo contains a large proportion of starch, and no tannin, while the frasera, on the contrary, contains tannin but no starch. Of course a decoction of genuine columbo takes a blue color from a solution of iodine, (iodide of starch,) and tincture of galls throws down a precipitate (tannate of starch), while neither effect is produced on the frasera. On the contrary, with the infusion of frasera, the sulphate of iron produces a blackish color, and gelatine throws down a precipitate. By neither agent is the columbo affected. The *peculiar* principle (*fraserin*,) which abounds to so great an extent in the frasera, is, doubtless, a neutral substance, and the principal source of its medicinal properties. Being free from starch, its infusion is less liable to decomposition than that of columbo.

Therapeutical Properties and Effects.—The root when freshly dug is both emetic and cathartic, in this respect resembling most of our indigenous tonics. When carefully dried, it is a mild tonic, fulfilling the same indications as the other simple bitters. According to some writers, it combines laxative with its tonic properties, in this respect resembling rhubarb, while its sweetish bitter taste reminds us of gentian. We have, however, never observed any laxative effects from its use, except in the fresh state. In atonic affections of the digestive organs, the cold infusion proves a serviceable remedy. Raffinesque states that its internal and external use has cured extensive gangrene of the lower extremities, when bark had failed; also, that it proves successful in intermittents, and is greatly used in the western States in fevers, colics, griping, nausea, diarrhea, indigestion, &c. An infusion of the fresh root is often used as a substitute for rhubarb, in diseases of children, as well as to obviate the constipation incident to pregnancy. It has the advantage of not stimulating; cold water is said to add to its efficiency, and prevent nausea or emesis. A teaspoonful of the powdered fresh root, in hot sweetened water, acts as a very prompt emetic. Clayton & Schœpf speak of its having been successfully employed in jaundice, scurvy, gout, suppressed menstruation, and even hydrophobia. In many respects it seems to resemble the menyanthes, (*buckbean*) and fulfils the indications pointed out under that plant.

Preparations and Administration.—The frasera may be given in powder, infusion, fluid extract, tincture, compound tincture, syrup, and fraserin.

The *powder* may be given in a dose of from thirty grains to one dram; although it is not an eligible form.

The *infusion* is made in the proportion of an ounce of the bruised root to one pint of boiling water, of which the dose is from one to two fluid ounces, repeated several times a day.

The *fluid extract*, not yet introduced, would be the most eligible form, of which one to two drams would constitute a dose.

The *tincture* is chiefly valuable as a stomachic tonic, in doses of one dram.

The *compound tincture*, as a tonic, laxative, and carminative, may be prepared from the root of frasera, rhubarb, and gentian, each one ounce; coriander, fennel and dill seed, each two drams; cardamom, half an ounce; raisins, half a pound; diluted alcohol, three pints. Macerate for fourteen days, express, and filter through paper. Dose, one to three drams.

Fraserin is the peculiar principle, with the resin combined. Dose, from two to four grains.

The *frasera* deserves to be cultivated as an ornamental plant. There is no good reason why the *cocculus palmatus* (columbo,) should not be grown in our southern States, where both climate and soil are well adapted to its successful cultivation. Both may be propagated alike from the seed and root.

AGRIMONIA EUPATORIA, (*Agrimony.*)

Natural Order, ***Rosaceæ;*** **Linnean System,** ***Icosandria—Di-pentagynia.***

This plant, which has been supposed by some botanists to have been introduced into our country from Europe, is indigenous to

North America as well as the eastern continent, and is, therefore, one of the most widely distributed plants known.

The *root* is perennial; the *stem* two to three feet high, simple, hairy, sometimes very hirsute. The *leaves* from four to nine inches long, interruptedly pinnate, upper ones three foliate; *leaflets* ovate, oval or oval lanceolate, coarsely dentate; *stipules* large, dentate; *petioles* twice larger than the calyx; *racemes* from six to twelve inches long, spicate; *flowers* yellow, on short pedicils, forming a long, simple spike; calyx tube curiously fluted with ten ribs, and surmounted with reddish, hooked bristles. There is one variety, (*hirsuta*) which is very hairy—with the leaflets narrower and more numerous; and another, which ranks more properly as a distinct species, (*A. parviflora*,) which has still smaller flowers. The plant abounds in woods and dry meadows, from Canada to Florida, and throughout the western States. It flowers throughout the summer months. Both the herb and root are officinal.

Physical Properties and Chemical Composition.—The herb has a weak but agreable aromatic odor, and a rough, bitterish, somewhat aromatic taste. The fragrance is strongest in the flowers. The root has similar properties, but its taste is more bitter and astringent. A volatile oil may be obtained from the plant by distillation with water.

The late analysis of this plant in your chemical laboratory, yielded as follows:—

Organic Matters,	6591.68
Inorganic "	408.32
Total,	7000.00

Gum,	369.44
Extract,	399.36
Starch,	125.00
Tannin,	192.00
Peculiar Principle,	789.84
Sugar,	96.64
Clorophylle,	158.40
Resin,	175.84
Soluble Salts,	399.04
Insoluble Salts,	58.28
Lignin, etc.	4328.16
Total,	7000.00

The peculiar principle, (*agrimonin*) is a neutral substance, and the source of the tonic properties of the plant, as might be inferred.

Therapeutical Properties and Uses.—This plant is a mild astringent tonic, and has been employed from a very remote period, in relaxed conditions of disease, as passive hemorrhages, and chronic affections of the mucous membranes. It has enjoyed considerable reputation also, as a deobstruent in jaundice and visceral obstructions, and as an alterative in diseases of the skin. It is very doubtful, however, whether it has any alterative properties worth notice. Although this plant is included by most writers on the materia medica, among the class of astringents, yet its action as an astringent is very feeble, and its true place is among the tonics. Pliny speaks of this plant as a royal herb, named after a king, (Eupator) the seeds of which, he says, drank in wine, is an excellent remedy for dysentery, or bloody flux.—(*The Hist. of the World*, vol. 2, p. 220.)

The medicinal properties of this plant compared with many others already describéd, are feeble, and, although mentioned by most writers on the materia medica, has been very properly omitted in the more recent editions of National Pharmacopœias. Lindley states that it is celebrated as a vermifuge; also, used as an astringent gargle and lotion, and a common ingredient in "herb teas." In France a decoction of this plant, with the lees of wine, is used successfully in the treatment of sprains. Bedel and Alibert recommend it very highly, also, in hemorrhage from the bladder, and in gonorrhœa, and leucorrhœa. Pallas speaks of its good effects as a vermifuge in the lower animals.

Preparations and Doses.—The same as those of the *frasera carolinensis*, above described.

ASARUM CANADENSE.

(*Wild Ginger—Canada Snakeroot—Indian Ginger—Heart Snakeroot—Coltsfoot—Broadleaf Asarabica, &c.*) **Natural Order,** ***Aristolochiaceæ;*** **Linnean System,** ***Dodecandria Monogynia.***

Among our apetalous exogenous plants, the asarum deserves a conspicuous place. Closely allied in botanical habit to the aristolochia, it resembles it closely, also, in its therapeutical properties. Its three species, *A. canadense*, *A. virginicum*, and *A. arifolium*, the two latter species found at the south, and the first throughout the United States, are endowed with the same medicinal virtues, and may be indiscriminately used in fulfilling the same indications.

The *A. canadense*, also, bears a close resemblance to the *A. europeum*, or asarabica, both in appearance and botanical character, although the latter has acrid properties, which do not belong to our species.

Canada snake root has a long, jointed, creeping, yellowish root or rhizoma, with radicles of the same color. The stem very short, dividing, before it emerges from the ground, into two long round hairy leaf stalks, each of which bears a broad kidney-shaped leaf; pubescent on both surfaces; of a rich shining light green above, red and pale or bluish beneath. A single flower stands in the fork of the stem, upon a hairy pendulous peduncle. The flower is often concealed by the loose soil or decayed vegetable matter; so that the leaves with their petioles, are the only parts that appear above the surface of the ground. There is no corolla; the calyx is very wooly, and divided into three broad concave acuminate segments, with the ends reflexed, of a deep brownish-purple color on the inside, and of a dull purple, inclining to greenish externally. The filaments, which are twelve in number, and of unequal length, stand upon the germ, and rise with a slender point above the anthers attached to them. Near the divisions of the calyx are three filamentous bodies, which may be considered as nectaries. The pistil consists of a somewhat hexagonical germ, and a conical grooved style, surmounted by six revolute stigmas. The capsule is six-celled, coriaceous, and crowned with the adhering calyx. The plant abounds in woods and shady places, and about old decaying logs and stumps, from Canada to Florida, and flowering from April to July.

Physical Properties and Chemical Composition.—The root, which is the officinal part, together with every part of the plant, has a grateful aromatic taste and odor. As found in the shops, it is in long, more or less contorted pieces, of the thickness of a pipe-stem or larger; brownish, and wrinkled externally; whitish within, hard and brittle, and frequently furnished with short fibres. To the taste, it is slightly bitter, and very agreeably aromatic, resembling in this respect the cardamom, although it has been said to be intermediate, between that of serpentaria and ginger. The leaves and petioles are more bitter and less aromatic than that of the root.

The recent careful analysis of this root in your laboratory, yielded.

Organic Matters,	90.00
Inorganic Matters,	10.00
Total,	100.000

Gum,	6.820
Albumen,	2.480
Starch,	2.144
Yellow Coloring Matter,	1.542
Bitter Principle, soluble in water,	9.142
Peculiar Principle, soluble in alcohol,	2.859
Sugar,	2.649
Extractive,	7.885
Resin, soluble in alcohol,	2.288
Fixed Oil,	1.542
Soluble Salts,	8.518
Insoluble Salts,	1.482
Lignin, &c.	50.649
Total,	100.000

The name, *asarin*, may properly be given to the peculiar principle found in the root. It is probably neutral; Dr. Bigelow found among its constituents a light colored, pungent, and fragrant essential oil, a reddish bitter, resinous matter, starch and gum; while Rushton found in addition, fatty matter, clorophylle, and salts of potash, lime and iron. Mr. Procter found the resin to be acrid as well as bitter, and without aromatic properties. Diluted alcohol is its most appropriate menstruum; though some of its virtues are imparted to water. Griffith supposes that the active principle is an essential oil, but this is only one of the active constituents.

Therapeutical Properties and Uses.—This plant is a stimulating tonic, possessing pretty active diaphoretic properties. It has been generally called an aromatic stimulant, but this by no means expresses its entire medicinal powers. Containing, as it does, fully nine per cent. of a soluble bitter principle; in addition to resin, a peculiar principle, a fixed and volatile oil, it combines the virtues of an aromatic stimulant, with those of a tonic. In this respect resembling very closely the serpentaria, for which it is an excellent substitute. Unlike the European asarum, it has no emetic nor cathartic properties, even in large doses and in the fresh state. In Canada, it has long been used as a condiment in place of ginger, and is equally acceptable to the stomach. As a tonic it is among the milder class, though well adapted to a great variety of cases. What has been said in regard to the Virginia snake root, will apply very well to this article; we have used it in the same cases and with equal success. It has one important advantage over the aristolochia, in being far more agreeable to the taste and acceptable to the stomach. In diseases of infancy and childhood, where a stimulating tonic is indicated, we have used this root with complete success. Raffinesque recommends it in cachexia, hypochondriasis, palpitations, low fevers, convalescence, obstructions, hooping-cough, &c., in small and often repeated doses. Dr. Wood speaks highly of it as an adjuvant to tonic and purgative infusions and decoctions, in debilitated states of the alimentary canal. It might be used with advantage in exanthematous affections, where the eruption is tardy in its appearance, or has been repelled. The infusion will also be found useful in tranquilizing the stomach, and checking vomiting. The cold infusion is also a good remedy in some forms of dyspepsia. In low fevers it is a very useful, grateful tonic stimulant, improving the appetite, augmenting the strength, and promoting all the secretions. As a stomachic, it will be found suited to the same cases as cardamom and ginger. In some parts of the country, great reliance is placed upon it as an emmenagogue, as an errhine in catarrh, &c., it is in very general use. A very pleasant and medicinal wine or beer is made by adding yeast and sugar to an infusion of the whole plant.

Preparations.—Powder, tincture, fluid extract, infusion, syrup, compound tincture.

The *powder* is often used in doses of from ten to twenty or thirty grains; also, as a cephalic snuff. The *tincture* is prepared by macerating four ounces of the root in two pints of diluted alcohol; this may be used as an addition to tonic infusions, in the proportion of one or two fluid drams for each dose. A *fluid extract*, (hydro-alcoholic) might be prepared in vacuo, which would combine all the virtues of the root in the most concentrated form;

of which a dose would be from one to three fluid drams.

The *infusion* is prepared with half an ounce of the root and a pint of boiling water, in a covered vessel, of which two fluid ounces may be given for a dose. A *syrup* is prepared by adding a proper quantity of sugar to the infusion, and this will be much improved by adding one-fourth part of the tincture to it, besides preventing decomposition.

A very agreeable and useful *compound tincture of asarum* may be made as follows:—

℞. Bruised orange peel and gentian, each ℥j.; asarum, ℥ij.; cardamom seed and ginger, each ℥ss. Macerate fourteen days in two pints diluted alcohol and strain. Dose—half an ounce.

Apocynum Cannabinum.

(INDIAN HEMP.)

Of the seventeen species of the genus *Apocynum*, the *Cannabinum* and *Androsœmifolium* are alone in medicinal use. These two strikingly resemble each other, though the leaves of the former are smooth, while those of the latter are pubescent; yet as many intermediate states occur, it is now considered that this difference of character does not amount to a specific distinction. They grow in similar situations, and flower about the same period.

The root is the only part which should be employed in medicine, and should be collected after the flowering season has passed and the tops begun to die; it is lactescent, and when fresh has an unpleasant, somewhat acrid, bitter taste, with a strong and disagreeable odor.

According the analyses made by Drs. Griscom and Knapp, the root contains tannin, gallic acid, gum, resin, wax, fæcula, bitter principle or apocynin, coloring matter, lignin, extractive, &c.

Its action upon the human system is well marked and energetic. It is a tonic, alterative, powerful emeto-cathartic, diaphoretic, expectorant, inducing also a tendency to sleep, independent of the exhaustion consequent upon vomiting. The evacuations brought on by it are large, feculent, watery, and are succeeded by perspiration. It is a most powerful hydragogue cathartic and diuretic.

It acts so powerfully in draining the system, that Dr. Rush called it the "vegetable trocar." Dr. Valentine Mott used it in dropsy among his clinical patients. It is suited to tonic dropsy, being too active for cases of an atonic character, where iron is advisable.

Dr. Knapp gave it in intermittent fever, pneumonic affections, dysentery, and as an alterative in enteritis. It acts as a sternutatory, and the fresh juice has been employed as an external application in cutaneous affections. As a tonic, it is admirably calculated to improve the tone of the digestive apparatus, and through this medium produce a corresponding effect upon the general system. On this account, probably, it is used in a dinner pill of some celebrity.

"Professor Merrill related to his class a case of ascites in a boy twelve years old, which was promptly relieved by this remedy, after every other treatment had failed, and the disease had progressed so far, in spite of them, that a time had been fixed for the operation of tapping. The extract was given, first, in doses of one grain, afterwards increased to two grains, three times a day. The effects were, moderate catharsis of a bilious and feculent character, free diuresis, without being profuse, and copious perspiration. Great relief and relaxation of the abdomen were obtained in the first twenty-four hours, and in five days there was no hydropic condition remaining. After this, the remedy had to be discontinued, although useful as an aperient, because of the profuse diaphoresis caused by it."—*Memph. Med. Rec.*, '54.

The following extract is from the pen of Dr. Griscom: "The Indian Hemp, when taken internally, appears to have four different and distinct operations upon the system: 1st, as an emetic; 2d, as a purgative; 3d, as a sudorific; 4th, as a diuretic. Each of these effects it produces almost invariably. Its first operation, when taken into the stomach, is that of producing nausea, if given in sufficient quantity (which need not be large,) and if this is increased, vomiting will be the result. It very soon evinces its action upon the peristaltic motions of the prima via, by producing copious feculent and watery discharges, particularly the latter, which action, when once excited, is very easily continued by the occasional administration of a wine-glassful of the infusion. The next operation of this remedy is upon the skin, when it displays its sudorific properties often in a very remarkable manner. Copious perspiration almost invariably follows its exhibition, to which effect is, in a great measure, attributed by some, the powerful influence it exercises over the various forms of dropsy. The activity of its diuretic properties does not appear to be so great in many instances as in others. In some cases, the urinary secretion, although somewhat increased in quantity, is not such as to be commensurate with the effect produced on the disease by the exhibition of the medicine. In other instances, its diuretic operation has been more manifest, causing very profuse discharges of urine, and in a very short time relieving the overloaded tissues of their burden.

Dropsy, is I believe, the only morbid affection for the relief of which the powers of the plant have been brought into successful requisition. Its very active and often violent operation, would seem, in a great measure, to preclude its use in diseases which are accompanied with much febrile excitement. Yet one might readily suppose that some of its particular properties might be very advantageously sought for in some diseases where much arterial excitement was not present, especially its emetic, sudorific, and cathartic properties, each of which operations might be separately obtained from giving it in well-regulated doses."

In the treatment of secondary syphilis, it will be found a valuable agent, and should be used with other articles. The following formula is recommended:—

Apocynin,
Stillingin,
Asclepin,
Helonin.

Its great success in the treatment of dropsy has suggested the following formula:—

Podophyllin,
Asclepidin,
Jalapin,
Apocynin,
Senecin.

In typhoid fever, during the convalescing stages, it is used in combination with hydrastis or gentian. The wine of apocynum is an excellent form for administering this remedy in cases of dropsy, in that while the apocynum is producing its peculiar effects, the wine both assists it by its tonic properties and keeps up the vigor of the system.

It enters into many of the valuable compounds used by physicians, and we doubt if once a practitioner is made acquainted with its properties, he will consent to abandon its use.

◆

Hypophosphites.

This class of preparations are being used extensively in this country in phthisis, but time enough has not elapsed to have any very reliable statistics, or information sufficiently favorable to justify their general recommendation. We have uniformly referred correspondents for information concerning these preparations to Parrish's *Practical Pharmacy*, and in the last number we intimated we should notice them more at length, as much enquiry exists concerning both their origin, use and value. In this connection, we give an interesting paper, read by Dr. Howard Townsend, of Albany, before the State Medical Society, a year since.

"The recent researches of Dr. Churchill, of Paris, into the therapeutic character and value of the Hypophosphites, in the treatment of tuberculosis, have lately attracted much attention from physicians in our own country, as well as in Europe. Consequently, some brief account of them may not prove without interest, particularly as their *unimportance* heretofore among our articles of the materia medica, have caused them to be passed over with very little or no notice in the works upon materia medica and therapeutics, to which we most commonly refer.

The salts called the hypophosphites are the result of the combination of hypophosphorous acid, with a base. Hypophosphorous acid differs from phosphorous acid in having a smaller amount of oxygen in its combination. *Hypo* being the Greek prefix in chymestry for *below* or *under*, thus hypophosphoric acid, whose chymical symbol is $2\ P + 0$—(two of phosphorous and one of oxygen,) is in the amount of oxygen which it contains *below* phosphorous acid, whose symbol is $2\ P + 3 0$—(two of phosphorous and three of oxygen.)

The hypophosphites are mostly crystallizable. When heated until decomposed they emit phosphuretted hydrogen. They are, as regards oxydation, permanent, in the air. Several of them are soluble in alcohol, and nearly all of them soluble in water.

The hypophosphites now employed are those of lime and soda, potassa and ammonia.

Hypophosphite of lime is the most important of these salts, as it not only, by oxydation in the economy, will afford phosphate of lime in a nascent state if needed, but its reactions with the carbonates of the alkalies, afford a ready mode of obtaining the alkaline hypophosphites.

Beside these hypophosphites of lime, soda, potassa, and ammonia, which have lately become so popular, the hypophosphite of the sesqui-oxide of iron has also been much employed.

In other days the phosphate of lime enjoyed a brief popularity in the treatment of rickets, and mollities opium, where its employment seems to be indicated upon chymical grounds. In 1851, Benecke, of London, brought again into notice the phosphate of lime, as a medicine. Deeming it as essential for animals as for plants, in the formation of cells, he concluded that it might prove useful in certain pathological conditions of the system, particularly those characterized by defective nutrition, such as is evinced in the scrofulous affections generally.

Milnè Edwards, of France, has, by a beautiful series of experiments upon animals during his course of lectures, proven that the *callus* in fractured bones forms much more quickly under the use of phosphate of lime, than it will when none has been administered.

Dr. John Francis Churchill, in a paper read before the Academy of Medicine, of Paris, (July 21st, 1857,) gives an interesting account of thirty-five cases of phthisis, treated by him with the hypophosphites—all being either in the second or third stages of the complaint; that is, they had either softened tubercles, or cavities in the lungs. Of these thirty-five cases he affirms that nine recovered completely, the physical signs of the disease disappearing altogether in eight of the nine cases. Eleven of the thirty-five cases improved considerably, and fourteen died, and one was yet under treatment at the time of the report.

From his experience he deduces the following conclusions in reference to the use of the hypophosphites in the treatment of phthisis.

The proximate cause, or at all events, an essential condition of the tubercular diathesis, is the decrease in the system of the phosphorus which it contains, in an oxygenizable state.

The specific remedy in the disease, consists in the use of a preparation of phosphorus, uniting these two conditions: first, of being in such a state that it may be directly assimilated, and at the same time be at the lowest possible degree of oxydation. To fulfill these two requisites, the hypophosphites of soda and lime seem the best fitted combinations, and should be given in doses varying from ten grains to a dram in the twenty-four hours, (twenty grains being Dr. Churchill's ordinary dose.)

Dr. Churchill further states that the physiological effects which he has observed produced by the hypophosphites, show that these preparations have a two-fold action—on the one hand, they increase that principle, whatever it may be, which constitutes *nervous force*, and on the other, they are the most powerful of *hæmatogens*, (*anglice*, blood producers,) being infinitely superior to all medicines of that class hitherto known.

"They seem," he further adds, "to possess in the highest degree all the therapeutical properties formerly attributed to phosphorus itself, and this, too, without any of that danger attendant upon the use of phosphorus, which has caused it to be almost proscribed as a medical agent."

By a resolution of the Academy of Medicine, of Paris, this paper of Dr. Churchill's was referred to a committee consisting of M. Louis, Trousseau, and Bouillaud. Since this paper was read by Dr. Churchill, the editor of the *Gazette Hebdomadaire*, of Paris, has been publishing an account of his observations upon patients treated by Dr. Churchill. Of *ten* cases, which he says, might be called tuberculous phthisis, with every appearance of certainty; in *one* the local disease was improved at the end of four and a half months; in *one* it remained stationary at the end of four months, and in eight the local disease was aggravated at the end of 4, 2, 3, 5, 4, 3 1-2, 4 1-2 and 3 1-2 months, respectively. As to the *general condition*, in *five* cases there was evident amelioration; in *one* there was no appreciable change, and in *four* there was aggravation.

After these results, he adds: "*It is impossible for me to attri-*

bute to the method of treatment adopted by Mr. Churchill, any influence over the progress of tubercles."

In conclusion, it may be stated, that although the hypophosphites have acquired no little reputation in the treatment of phthisis and the different forms of scrofula, yet we can scarcely, in these cases, deem their administration indicated, when we consider that there is in ordinary food more of the phosphates than the system, with its greatest demands, at all needs, which is proven by the fact of their constantly escaping with the evacuations, and also, that in those very disorders where they are now supposed to be indicated, they not unfrequently are found in excess in the blood and urine. In scrofulous cases, too, it would seem doubtful whether the want is so much that of the material for cells, as of the due power to appropriate those materials which are already furnished. We must not forget, too, in considering the action of the hypophosphites, upon the economy, that in many of the reported cases of cures they have been administered in combination with cod liver oil and tonics, which, after all, may have been the active medicines."

Edward Parrish in his *Practical Pharmacy*, devotes much space to the consideration of these remedies, from which we propose to quote largely.

SALTS OF HYPOPHOSPHOROUS ACID.

"Hypophosphorous acid, as already shown, is a compound of phosphorous and oxygen, one equivalent of each, PO. It requires, however, no less than three equivalents of water to form the liquid acid, and of these, two equivalents enter into its salts, one only being replaced by bases. When heated, these salts emit phosphuretted hydrogen, a peculiar self-inflammable gas, (fire-damp) of an odor reminding some, of garlic. They are permanent in the air, but in solution, by heat, are liable to absorb oxygen; they are all soluble in water, and a few are crystalline. Several processes have been used to produce these salts. Rose recommends boiling phosphorus in a solution of caustic baryta till all the phosphorus disappears, and the vapors have no longer the garlic odor. Lime is found to answer the same purpose, and is commonly used. Hypophosphite of lime is, perhaps, the most important of these salts; by oxydation in the animal economy, it is probably converted into readily assimible nascent phosphate of lime, and by decomposition it furnishes the other salts of this acid. It is moreover, one of the salts most highly recommended br Dr. Churchill, to whose suggestion, in the first instance, the employment of these remedies may be traced.

Prof. Procter has brought to this subject his admirable talent for research, and has simplified it in an article in the *American Journal of Pharmacy*, vol. xxx. p. 118, from which portions of what follows are quoted.

"*Hypophosphite of Lime.*—When phosphorous is boiled with milk of lime, it gradually disappears, with evolution of spontaneously inflammable phosphuretted hydrogen, which explodes as it reaches the atmosphere with the formation of water and phosphoric acid. When the strong odor of phosphuretted hydrogen ceases to be given off, the liquid contains, besides the excess of lime, nearly half of the phosphorus as phosphate of lime, and the remainder, deducting the considerable portion which has escaped into the air as phosphuretted hydrogen, is hypophosphite of lime. According to Wurtz, more than one equivalent of water is decomposed, and the phosphuretted hydrogen is accompanied by free hydrogen. If this be true, the source of the super-oxydation of so much of the phosphorus is traceable to the resulting oxygen; but Rose is of the opinion that this oxygen is derived from the atmospheric air in contact with the boiling liquid. When the process is conducted in a flask, it requires a constant ebullition of the liquid to prevent the explosion consequent upon the entrance of the atmospheric air. To avoid this result, it has been found safer to employ a deep, open vessel. The constant evolution of gas and vapor, which keeps a froth on the surface, excludes the atmosphere in a great degree, so that the yield is not much diminished, whilst the safety and easiness of the process are greatly increased. The process should be conducted under a hood, with a strong draught, or in the open air, to avoid the disagreeable fumes which are evolved.

Take of Lime, recently burned, - -	4 lbs. av.
Phosphorus, - - - - -	1 lb. "
Water, - - - - - -	5 gals.

Slake the lime with a gallon of the water, put the remainder in a deep boiler, and as soon as it boils add the slaked lime, and mix to a uniform milk.

The phosphorus is now added, and the boiling is kept up constantly, adding hot water from time to time, so as to preserve the measure as nearly as may be, until it is all oxidized and combined, and the strong odor of the gas has disappeared. The mixture froths much, and but little of the phosphorus reaches the surface. Then filter the solution through close muslin, wash out that portion retained by the calcareous residue with water, and evaporate the filtrate till reduced to six pints. The concentrated liquid should now be refiltered, to remove a portion of carbonate of lime which has resulted from the action of the air on the lime in solution, and again evaporated till a pellicle forms, when it may be crystallized by standing in the drying-room, or the heat may be continued with stirring till the salt granulates, when it should be introduced into bottles.

Hypophosphite of lime is a white salt, with a pearly, marginlike lustre, and crytallizes in flattened prisms. Its composition, according to Wurtz, is $CaO,+2HO,PO$, the water being essential to the salt. It is soluble in six parts of cold water, and in not much less of boiling water; it is soluble slightly in diluted alcohol, but insoluble in alcohol, sp. gr. .835.

E. Scheffer prepares this by a modification of this process, which, he says, saves the great waste occurring in the above process, and has the advantage of liberating very little of the offensive gas produced by the other. He first oxydizes the phosphorus by fusing it under water, and pumping atmospheric air into it; the phosphorus burns somewhat, and swells up, having become partially converted into oxyde of phosphorus, P_2O, and now combines with milk of lime without boiling, most readily at 130F., the gas given off being chiefly hydrogen, and not, as in the other case, the offensive compound of phosphorus and hydrogen, the production of which is so great an annoyance in the neighborhood of chemical manufactories.

Hypophosphite of Soda.—This is prepared by double decomposition between hypophosphites of lime and crystallized carbonate of soda.

Take of	Hypophosphite of lime, - - -	6 oz.
	Crystallized carbonate of soda, - - -	10 oz.
	Water, - - - - - - -	q. s.

Dissolve the hypophosphite in four pints of water, and the carbonate in a pint and a half, mix the solutions, pour the mixture on a filter, and lixiviate the precipitate of carbonate of lime, after draining, with water, till the filtrate measures six pints. Evaporate this liquid carefully, till a pellicle forms, and then stir constantly, continuing the heat till it granulates. In this state the salt is pure enough for medical use; but if desired in crystals, treat the granulated salt with alcohol, sp. gr. .835, evaporate the solution till syrupy, and set it by in a warm place to crystallize.

Hypophosphite of soda crystallizes in rectangular tables with a pearly lustre, is quite soluble in water and in ordinary alcohol, and deliquesces when exposed to the air, Its composition is $NaO+2HO,POa$.

Hypophosphite of Potassa.—This is prepared by the same process as that given above for the soda salt, substitutiug five and three quarter ounces of granulated *carbonate of potassa*, in place of ten ounces of crystallized carbonate of soda, and using half a pint instead of a pint and a half of water to dissolve it.

Hypophosphite of potassa is a white, opaque, deliquescent salt, very soluble in water and alcohol. Its greater tendency to absorb moisture renders it less elligible for prescription than the soda salt. Its composition is $KO+2HO,PO$.

Hypophosphite of Ammonia.—This is prepared from hypophosphite of lime and sulphate or carbonate of ammonia.

Take of Hypophosphate of Lime, - - -	6 oz.
Sesquicarbonate of ammonia, (translucent)	7.28 oz.
Water, - - - - - - - -	q. s.

Dissolve the lime salt in four pints of water, and the ammonia salt in two pints of water, mix the solutions, drain the resulting carbonate of lime, and wash out the retained solution with water. The filtrate should then be evaporated carefully to dryness, then dissolved in alcohol, filtered, evaporated, and crystallized.

The salt is deliquescent in the air, very soluble in alcohol and water, and when carefully heated evolves ammonia, and leaves hydrated hypophosphorous acid. The composition of this salt is NH_3+2HO,PO.

Hypophosphites of Iron.—There are two hypophosphites of iron in use in the preparations which follow, hypophosphite of sesquioxyde, $Fe_2O_3,3PO$, as suggested by Prof. Procter, and hypophosphite of protoxide, $FeO,2HO,PO$, proposed by W. S. Thompson, of Baltimore. The first of these is directed to be prepared by precipitating a solution of hypophosphites of soda or ammonia with solution of sesquisulphate of iron. It is necessary to avoid the presence of an alkaline carbonate or the precipitate will be contaminated with free sesquioxide of iron. After washing the gelatatinous precipitate thrown down by the mixed liquids, which must be done with care, as in this state it is soluble, it may be dried into an amorphous, tasteless white powder, freely soluble in hydrochloric and hypophosphorous acids.

The hypophosphite of protoxide of iron is present in one of the syrups, for which recipes are given below, and is recommended in this form of preparation by being more permanent than the sesquisalt, which, as observed by W. S. Thompson, continually tends to pass into proto-salt in saccharine solution; the proto-salt is also more soluble.—(*To be continued.*)

From the London Pharmaceutical Journal.

The Arsenic Eaters of Styria.

By Charles Heisch, Lecturer on Chemistry at Middlesex Hospital.

[CONCLUDED.]

Dr. Arbele writes: "Mr. Curator Kursinger, (I presume the curator of some museum at Salzburg,) notwithstanding his long professional work at Lungau and Binzgau, knew only two arsenic eaters—one the gentleman whose case has just been related, the other the ranger ef the hunting district in Grossarl, named Trauner. This man was at the advanced age of eighty-one, still a keen chamois hunter, and an active climber of mountains; he met his death by a fall from a mountain height while engaged in his occupation. Mr. Kursinger says he always seemed very healthy, and every evening regularly, after remaining a little too long over his glass, he took a dose of arsenic, which enabled him to get up the next morning perfectly sober and quite bright. Prof. Fenzl, of Vienna, was acquainted with this man, and made a statement before some learned society concerning him, a notice of which Mr. Kursinger saw in the *Wiener Zeitung;* but I have not been able to find the statement itself. Mr. Krum, the pharmaceutist here, tells me that there is in Stursburg a well-known arsenic eater, Mr. Schmid, who now takes daily twelve, and sometimes fifteen grains of arsenic. He began taking arsenic from curiosity, and appears very healthy, but always becomes sickly and falls away if he attempts to leave it off. The director of the arsenic factory before alluded to is also said to be very healthy, and not to look so old as forty-five, which he really is.

As a proof how much secresy is observed by those who practise arsenic eating, I may mention that Dr. Arbele says he inquired of four medical men, well acquainted with the people of the district in question, both in the towns and country, and they could not tell him of any individual case, but they knew of the custom only by report.

Two criminal cases have been mentioned to me, in which the known habit of arsenic eating was successfully pleaded in favor of the accused. The first by Dr. Kottowitz, of Neuhaus, was that of a girl taken up in that neighborhood on strong suspicion of having poisoned one or more people with arsenic; and though circumstances were strongly against her, yet the systematic arsenic eating in the district was pleaded so successfully in her favor that she was acquitted, and still lives near Neuhaus, but is believed by every one to be guilty. The other case was mentioned by Dr. Lorenz. A woman was accused of poisoning her husband, but brought such clear proof that he was an arsenic eater as fully to account for arsenic being found in the body. She was, of course, acquitted.

One fact mentioned to me by some friends is well worthy of note. They say:—"In this part of the world, when a grave-yard is full, it is shut up for about twelve years, when all the graves which are not private property by purchase are dug up, the bones collected in the charnel-house, the ground ploughed over, and burying begins again. On these occasions, the bodies of arsenic eaters are found almost unchanged, and recognizable by their friends. Many people suppose that the finding of their bodies is the origin of the story of the vampire." In the *Medicinischer Jahrbuch des Oster: Kaiserstaates*, 1822, *neuest Folge*, there is a report by Prof. Schallgruber, of the Imperial Lyceum at Gratz, of an investigation undertaken by order of government in various cases of poisoning by arsenic. After giving details of six *post-mortem* examinations, he says:—"The reason of the frequency of these sad cases appears to me to be the familiarity with arsenic which exists in our country, particularly in the higher parts. There is hardly a district in Upper Styria where you will not find arsenic in at least one house, under the name of hydrach. They use it for the complaints of domestic animals, to kill vermin, and as a stomachic to excite an appetite. I saw one peasant show another, on the point of a knife, how much arsenic he took daily, without which, he said, he could not live; the quantity I should estimate at two grains. It is said, but this I will not answer for, that in that part of the country this poison is used in making cheese; and, in fact, several cases of poisoning by cheese have occurred in Upper Styria, one not long since. The above-mentioned peasant states, I believe truly, that they buy the arsenic from the Tyrolese, who bring into the country spirits and other medicines, and so are the cause of much mischief." This report is, I believe, mentioned in "Orfila's Toxicology," and one or two other works, but I have not seen it quoted myself. It is interesting, as being early and official evidence of arsenic eating. Since I received the above information, a gentleman who was studying at this hospital told me that, when an assistant in Lincolnshire, he knew a man who began taking arsenic for some skin disease, and gradually increased the dose to five grains daily. He said he himself had supplied him with this dose daily for a long time. He wrote to the medical man with whom he was assistant, and I have been for a long time promised full particulars of the case; but beyond the fact that he took five grains of arsenic, in the form of Fowler's solution, daily, for about six years, and could never leave it off without inconvenience, and a return of his old complaint, I have as yet not received them. I have delayed publishing these facts for some time, hoping to get information on some other points, for which I have writto my friends abroad; but as considerable delay takes place in all communications with them, I have thought it better to publish at once the information I had already received. All the parties spoken of are people on whom the fullest reliance can be placed, and who have taken much pains to ascertain the foregoing particulars. The questions which still remain unanswered are these:—

1st. Can any official report be obtained of the trials of the two people mentioned by Drs. Kottowitz and Lorenz?

2d. Do medical men in these districts, when using arsenic medicinally, find the same cumulative effects as we experience here? Or is there anything in the air or mode of living which prevents it?

3d. Can any evidence be obtained as to how much of the arsenic taken is excreted? To show whether the body gradually becomes capable of enduring its presence, or whether it acquires the power of throwing it off.

I have proposed to the gentleman who furnished me with the particulars of his own case, either to make an estimate of the arsenic contained in his own urine or fæces during twenty-four hours, or collect the same and forward them to me that I may do so, but as yet have received no answer.

Hypophosphites in some Conditions of Disease in Young Children.

By O. C. Gibbs, M. D., Frewsburg, N. Y.

November 15th, 1859, we were called to see a female child, aged 11 months. The child was of a decidedly scrofulous habit, had from the first few weeks of life been troubled with scrofulous sores and cutaneous eruptions; but at present it was suffering from an attack of pneumonia. The general and physical symptoms were all well marked. We ordered syrup of ipecacuanha, spirits of nitre, and paregoric in appropriate doses for internal remedies, and applied mustard to the chest. The patient was closely watched, yet the symptoms gradually increased in severity. On the third day, syrups ipecac. and liquorice were given in combination, and powders composed of Dover's powder, quinine, and small doses of the chalk and mercury mixture were added to the treatment. The symptoms still increased in severity; though the skin was moist, the cough was troublesome, the pulse very frequent, from 130 to 140, and unpleasant head symptoms began to manifest themselves. The ipecacuanha was abandoned, and the iodide of potassium was substituted, and wine or brandy was soon superadded to the treatment. In spite of treatment, great prostration came on, the pulse was very feeble, and so frequent as to be with difficulty counted. The patient was seemingly unconscious of all surrounding objects, a constant moaning was kept up, the arms were constantly sawing the air, muscular spasms were occasionly observed, and the eyes were either strongly drawn to one side, or strabismus was added to the list of ominous symptoms. The eyes were generally open, yet at times there was no evidence of seeing. The pupils were sometimes greatly dilated, and at others as preternaturally contracted. The pectoral symptoms were upon the decline, the cough was less, and the physical signs gave evidence of an abatement of the original disease; yet all hopes of a favorable issue grew less day by day. A blister was applied over the cervical region of the spine, and croton oil applied over such places as had been the more common sites of the former cutaneous disease, with the hope of establishing an eruption not unlike that which for two or three weeks had passed away. Iodide of potassium, quinine, small and frequently repeated doses of opium for its stimulating effect were continued, and milk punch and beef tea were administered liberally.

On the evening of the 23d, the eighth day of treatment, we left our little patient, informing the mother that death would probably end the child's sufferings before morning. It was with much sorrow and regret that we gave this unfavorable prognosis. The parents were our intimate friends, and the patient was an only child. To please a friend of the parents, we had been asked to consult with a physician of limited study, and still more limited experience, and who, previously, in his intercourse with us, had so shamefully disregarded all principles of professional honor, that we were compelled, on this occasion, to decline the solicited consultation. Death, under such circumstances, would give unfriendly influence an opportunity to incite complainings and regrets. If other influences were wanting to nerve us to the fullest extent of our energies, it might be found in the fact that, though in quite active business, for more than two years, we had not lost a patient under sixty-five years of age, and we were desirous of protracting that interval to the utmost.

On our way home, we mentally reviewed the symptoms and the treatment from the beginning. That the pneumonia was gradually subsiding there could be no doubt. It was quite probable that there was no inflammation about the cerebral meninges, and that there was no effusion upon, or within the brain. It was probable that the symptoms arose from *anæmia*, and that death was about to take place because the nerve centres did not receive the requisite stimulus. Yet what treatment better than that in use could be brought in requisition, unless we practiced transfusion? This last we had never practiced, and were unwilling to commence in so young a patient. A more decided nerve stimulant and tonic was wanted. Was it to be found in our list of remedies? Strychnia was thought of; but could so powerful a remedy be safely administered, in a child so young, with hopes of beneficial results sufficiently speedy for our purpose? Reflecting thus, a conviction came over us, with the assurance almost of prescience, that the syrup of the hypophosphites of lime and soda was the best remedy in the materia medica, to meet the indication presented in this case under consideration. The brain and spinal marrow contains phosphorus largely, and it is quite probable that a remedy that will supply it in an immediately available form, will supply the stimulus desired. So plausible was this reasoning to our mind, at the time, that we returned immediately back, and in the darkness of a stormy night sought our little patient again. In addition to the treatment formerly advised, we ordered five drops of the syrup of the hypophosphites of lime and soda, to be repeated every two hours. We urged a persevering use of remedies, however discouraging the circumstances, until death or improvement should take place.

On the following morning we found our patient apparently somewhat improved. The moaning was less, the strabismus and spasmodic drawing of the eyes to one side had passed away, and the sawing of the air with the hands was much diminished. Though the prostration was great, and the symptoms still very alarming, yet the general expression was one that gave us reason to hope still for a favorable issue.

The treatment was continued, and the patient made a rather slow but perfect recovery.

We are aware that any conclusions drawn from one case would be as likely to be false as true, and our readers are left to draw their own conclusions from the case. The reasonableness of the treatment of hydrocephaloid disease, with the hypophosphites, connected with the prompt and satisfactory result in the above case, have induced us to report it. Subsequent experience only can determine the value of the remedy.—*Pacific Med. and Surg. Jour.*

Antiphlogistic Powers of Morphia.

Dr. Z. Laurence relates (*Med. Times and Gaz.*, Dec. 31, 1859,) several cases of sclerotitis and of iritis, treated by morphia.

These cases he considers "establish an important practical fact, viz., that morphia is *per se* a powerful antiphlogistic,* capable of curing these acute inflammations of the eye, in which up to the present time bloodletting, blistering, and mercurialization have been considered necessary. As regards loss of blood, all will be agreed on the propriety of dispensing with it, where it can be done so with safety. Again, how constant an occurrence is it to see paroxysms of acute inflammations for a time apparently relieved by bloodletting, till the subsequent vascular reaction sets in, but to recur again and again and require as many repetitions of this same objectionable remedy. I would further ask surgeons and physicians, what evidence have they that in the com bination of mercury and opium given with a view of 'putting the patient under the influence of mercury,' as it is termed, it is not really the *opium* which does the good, and that the mercury and its action on the mouth may not be to say the least, useless! † And I would finally ask the physicians of this country to test the powers of morphia in the treatment of the acute inflammations of the internal organs of the body."

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* In all the cases mentioned, the patients had been using warm fomentations to the eyes before applying at the hospital.

"If we seek for an explanation," says Mr. L., "of the above very remarkable action of morphia, in reducing abnormal fullness of the vessels of the sceleroic, we may find it in the relations of pain to vascular congestion. Pain has generally been regarded rather as the effect, than as the cause of the repletion of blood vessels; but it is quite an open question, whether or not in certain classes of cases the order of things may not be inverted? Such may be the case in the inflammations of the sclerotic, we have just been discussing. That, on the other hand, vascular congestion may react as a cause of pain, is not improbable. The theory I would submit is, that the action of morphia in these cases depends on its known power of reducing nervous irritability, which may be viewed as the primary cause of the inflammation. In these deep-seated inflammations of the eye this view is very much borne out by the seat of the pain; this will be found to follow strictly the branches of the fifth nerve; indeed, the precision with which the patients themselves localize the pain is very remarkable, whilst we have further evidence of the nervous nature of these cases in the intense watering of the eye (dependent on irritation of the lachrymal branch of the fifth nerve.) In this way I conceive the irritation is propagated to the vessels through the intervention of the connections existing between the fifth and sympathetic nerves."

[We cannot doubt the beneficial influence of morphia in some cases of inflammation of the eye, especially those attended with severe pain, but we must be cautious not to generalize too far, as Mr. L., seems to us to have done. One of the cases related by Mr. L, illustrates this, for in it (a case of sclerotisis,) morphia entirely failed to afford relief, and the patient was subsequently cured by leeches, blisters, and mercurialization.]—*Pac. Med. and Surg. Jour.*

Nitrous Oxyde.

By George J. Ziegler, M. D.

Nitrous Oxyde—Its Properties and Applications.—Among other events of pre-eminent importance, the present era has seen the realization of that long dream of the past for a practical method of speedily producing general insensibility in order to obviate pain and suffering, and facilitate those mutilations of the animal organism which are unhappily so frequently necessary. The practical exposition of this great thought of the past in the discovery of the means for the production of that state of insensibility now known as anæsthesia, affords a striking illustration of the truth of the proverb that the dreams of one age become the realities of another. The general history of the development of this grand idea, from its original conception to its final culmination and practical demonstration, shows how gradually but surely knowledge progresses from one point to another through successive periods of time. All honor, then, to those who conceived the idea and those who perfected this noble discovery of anæsthesia! That to Dr. Horace Wells belongs the credit of the practical exposition of this great truth there is now but little doubt, yet it must be admitted that he was unfortunate in the selection of the particular agent—nitrous oxyde—for its experimental illustration. For, notwithstanding the general belief upon the subject founded mainly upon his experiments, it is very doubtful whether this agent will produce true anæsthesia at all—the general experience of those who have experimented with it most largely being in opposition to this view. This opinion is sustained by the fact that, notwithstanding the peculiar effects of the laughing gas upon the human system, led Sir Humphrey Davy to suggest that "as nitrous oxyde, in its *extensive operation appears capable of destroying pain*, it may probably be used with advantage during surgical operations in which no great effusion of blood takes place;" yet they were not sufficiently striking in this respect to induce him to attempt any such practical application of his thought. This was contrary to his usual practice, for he was ever alive to the slightest opportunity for a new discovery. That the nitrous oxyde does produce a high degree of pleasurable excitement, during which the mind may be so entranced as to become temporarily indifferent to, or even unconscious of, impressions made upon the organism, there is little doubt; but that it reduces the cerebro-spinal or general nervous system to a state of insensibility like that produced by those representative anæsthetics, chloroform and ether, is contrary to general experience. Indeed, this seems to prove that its influence upon the animal economy is directly opposite and antagonistic to that of such agents. In reality it differs therefrom not only in properties, but also in constitution; for they are composed largely of the elements hydrogen and carbon, while its sole and exclusive constituents are oxygen and nitrogen. Moreover a very general analysis of its physiological properties and therapeutical influences will also show that it differs as widely in these respects from the well-recognized anæsthetics as it does in constitution. Thus, for instance, in the case of chloroform: this directly prevents aeration of the blood, if it does not also deoxidize that fluid, depresses the cerebral and general nervous system, causes relaxation of the muscular and other contractile tissues, paralyzes the heart, and thus produces death,—its tendency being, in fact, to depress the vital energies and destroy life by direct and positive sedation. Ether, on the other hand, is primarily somewhat stimulant to the brain and nervous system, less immediately active in arresting oxydation of the blood, and in producing relaxation, though ultimately depressing and destructive, much in the same way as its congener. These agents, therefore, act by preventing arterialization of the blood, depressing the nervous system, checking general cell and nutritive action, and prostrating the vital energies. Hence the process of anæsthetization is a process of devitalization, and the anæsthetic condition a state of suspended animation artificially produced; the truth of which is demonstrated by the fact that this approximate or partial, often proceeds, notwithstanding the utmost care, to complete and absolute death. These agents are, therefore, positive and powerful sedatives.

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† **Again, mercury is presumed to have an "absorbing power" over plastic effusions, such as occur in acute iritis: here, too, it is a fair question whether the absorption of the inflammatory exudations is not rather a natural process, supervening on the cessation of the inflammation, (such as we daily see in the absorption of divided cataracts, after the operation by solution, as soon as the inflammatory consequences of the operation have passed off,) than any, if I may be allowed the expression, "mercurial" process?**

Between the constitution and properties of the respective agents just considered in common with all the other well-known sedatives and anæsthetics and the nitrous oxyde there is a wide difference. Thus, for instance, instead of producing sedation and insensibility, it, on the contrary, usually augments general and special sensibility, both during and after its administration. Moreover, instead of retarding, it increases both directly and indirectly, the oxydation of the blood, stimulates the cerebral, nervous and muscular organs, promotes contractility and general cell and vital action, and thus invigorates the whole system and acts as a true tonic. Its effects in these respects are, indeed, so well marked as to place it in direct antagonism to the various sedatives and render it very efficient in not only counteracting their effects by stimulation, but also to some extent to act as an antidote thereto. My own observation, experiments, and experience have taught me that this agent—variously designated nitrous oxyde, protoxide of nitrogen, or laughing-gas—is a direct, potent, and permanent chemico-organic, arterial, nervous, cerebral, and general stimulant, diuretic, aphrodisiac, and antitoxic; and is thus a valuable tonic, secernent, resolvent, alterative, antidote, etc., etc.

These remarks might be greatly extended and much evidence presented in support of the views advanced, but as that would lead to a discussion of many points not so pertinent to the objects of this journal, we refer those interested to Sir Humphrey Davy's work on Nitrous Oxyde, and to the several essays by the writer, respectively entitled Zoo-adynamia; Antidotal Applications of Nitrous Oxyde, *Boston Medical and Surgical Journal*, vol. xlvi., No. 14; Anæmatosis—its Consequences, Prevention, and Treatment, *ibid*, vol. xlvi., Nos. 22 and 23; Experimental Investigations on the Antidotal and Revivifying Properties of Nitrous Oxyde, *ibid.*, vol. xlvii., No. 19; Hæmatosis—its Natural and Artificial Induction, *ibid.*, vol. xlix., Nos. 3, 4, 5, and 6; Glucosis, *ibid.*, vol. l., No. 11.—*Dental Cosmos.*

Bi-Tartrate of Potassa in Menorrhagia.

By J. A. Chambers, M. D.

My attention was directed to the use of the above remedy, in 1848, by a communication published in Rankin's Half-Yearly Abstract of the Medical Sciences, from Dr. Sylvester. Former experience teaching me the inefficacy of the usual remedies in the treatment of menorrhagia, I determined to use it upon the authority given, when opportunity offered, knowing its inability to do *harm, if not beneficial.*

I may state that you may class me among the old fogies in medicine in this respect. I love the noble profession of medicine and appreciate its improvements, but am not one of those whose enthusiasm lead them to jump at the discovery of new remedies, especially when they are energetic in their action, in the treatment of disease. Remedies powerful in their action upon the human system must inevitably do harm if no good. Therefore, *ample testimony* should only justify a physician, in *private* practice, in using them, unless as a last resort.

Believing, as I have said, in the inability of the remedy to produce harm, if no good, in such cases, I commenced the use of it in menorrhagia, and have continued its administration when my judgment dictated its necessity, for the last twelve years, with greater success than with any one known remedy in that disease. Its action is rational, and conjoined with rest in the horizontal position, diet regulated in accordance to circumstances, with perfect quiet of mental as well as physical exertion, its effects are beneficial and speedy.

I will give the following case of recent occurrence:—Was called on the 7th of this month (June) to see Mrs. J. C., age about 40, the mother of nine children, the youngest three years old. Has menstruated regularly up to October last, since which time she has been irregular and *hrofuse;* sufficiently so to make its inroads upon her constitution. She was pale and exsanguined when I saw her, discharging freely for the last five weeks. Thinking that it was kept up by a want of tone in the muscles of the uterus and its inability to contract, I prescribed teaspoonful doses of vinum ergota, repeated four or five times in the twenty-four hours, promising to call in two days. Upon my return, I ascertained that the discharge had increased, if any difference. Her bowels being very costive, I prescribed the bi-tartrate with a two-fold object; to remove costiveness, and check the discharge. I directed her to take three teaspoonsfuls of the medicine and put it in a sufficient quantity of boiling water to dissolve it, adding sugar sufficient to make it palatable, to let it cool, and drink the quantity in twenty-four hours—when that was gone, to use more in the same way. She did as directed; and in thirty-six hours was entirely relieved, since which time I have heard of no recurrence of it. This is but one case out of numbers in which it has thus acted.—*St. Joseph Jour. of Med. and Surg.*

Case of Chronic Sciatica.

By G. P. Hachenberg, M. D., Coxsackie, N. Y.

Mr. Edward H——, age 45, a ship carpenter of this place, suffered severely with sciatica for about a year. He was the subject of medical treatment of several physicians, and quacks of homœpathic and hydropathic order. In New York, an Aesculapius put him in a hot steam oven, in order to sweat the pain out of him; but all to no purpose. He was of powerful frame and constitution, and temperate in his habits.

He became my patient late last fall. The following is an abstract of my case-book of the case:—

Pathological basis of the treatment.—Chronic inflammation of the neurilemma of the sciatic nerve with several of its branches.

1. The *prima viæ* corrected with podophyllin, mercury, quinine, and low diet.

2. An alterative action of the bowels kept up by podophyllin, aloes and blue mass.

3. After having secured the highest normal condition of the chylopoietic organs, an array of nervines were brought to bear against the characteristic irritability of the complaint, ever bearing in mind its inflammatory nature—the supposed inflammation of the neurilemma, with a weakened and irritable condition of the nerves.

4. *Special treatment.*—Owing to an idiosyncrasy of the internal use of opium, causing painful strangury, it was entirely dispensed with. The first favorable effects on the pain was induced by the heroic administration of sulphate of quinine, with morphine and creasote acupuncturation. When the former could not be borne any longer with impunity, and the latter began to lose their effects, the remedies were alternated with the internal use of Fowler's solution, and externally, the veratria ointment. When the disease appeared to hold itself in *statu quo*, we broke into this habit—locally by unloading the veins over the regions of the pain, and constitutionally by the use of the wine of colchicum. Towards the last we alternated the arsenic by the use of the iodide of potassium, with the object of more effectually to break up the patients arthritic diathesis. In this we only succeeded by staggering considerably the constitutional stamina of health, but with a jealous care kept the temporary impairment of health within the limits of a functional character. As we proceeded with the treatment, the pain became less. In his early convalescence, the patient contrary to his wish and disposition, was urged to use his limbs by walking several miles a day. With this exercise we favored the stomach and general system again with an alterative and tonic treatment. He became rapidly convalescent, both from medicine and disease. The pain disappeared, and the numbness that remained I ordered to be *worked out* by walking and hard labor out doors.

The application of electricity injudiciously applied, brought about a relapse after the patient had been nearly well, which took one of the three months he was under our treatment, to gain what was lost by this agency.—*Cincinnati Med. and Surg. News.*

Relations of Belladonna and Opium, and Poisoning by Belladonna.

By JAMES SEATON, Esq., L. R. C. S. E., L. A. C., Leeds.

(In September, 1858, "two young men having gathered about a pint of the ripe fruit of the atropa belladonna, which they found growing in an old quarry a few miles from Leeds, on their arrival home distributed them among their friends, believing them to be innocuous." A great number of the poisoning cases resulting from this imprudence came under the notice of Mr. Seaton—of which he relates ten, only one being fatal, and concludes by the following remarks:)

The first symptom appears to have been dryness of the mouth and throat; next, indistinctness of vision and dilated pupil; and, afterwards, in the more severe cases, delirium supervened. I found in one man, who had only swallowed one berry, the dry mouth and fauces without any affection of vision. The indistinctness of vision was the most persistent symptom; in all the cases it existed to a greater or less degree for several days, and the boy, C. C.'s vision continues defective up to the present time. The delirium was of a busy, restless, vivid character, but generally rather pleasing than otherwise. The patients appeared to think that they were pursuing their ordinary occupations; one boy appeared eager in flying a kite; another pulled chairs and tables about, thinking he was working in a coal pit; while the woman, E. W., appeared to be remarkably busy with her household duties. All their movements were of a quick, excited character, strikingly resembling delirium tremens. There was no very marked vascular excitement, the skin was, in most of the cases, moderately cool, and the pulse rapid, but without power.

The remarkable tolerance of opium in these cases would appear to bear out the conclusion at which Mr. Bell, Dr. Graves, and others have arrived: that opium and belladonna mutually counteract each other. In none of the cases in which delirium was present, were the symptoms alleviated until sleep was obtained; and, after sleep, the patients felt comparatively well. The pupils were widely dilated so long as the delirium continued, and when sleep was obtained, were either contracted or reduced to the natural size.

With regard to the fatal case, I may mention, that she was decidedly scrofulous, and had been under treatment for several months for disease of the bones of the face. It will be observed that she took much less opium than several of the cases which recovered, and that, at the moment of death, the pupils were very widely dilated.

The post-mortem appearances are chiefly valuable for their negative testimony. The condition of the brain appeared to be as nearly as possible perfectly natural; as was the mucous membrane of the stomach and intestines. The only thing which was abnormal was the remarkable fluidity of the blood in every part of the body.—*Med. Times and Gazette.*

Strychnia in the Treatment of Dyspepsia.

By A. Leared, M. B., M. R. I. A., Physician to the Great Northern Hospital.

From this work, which is well worthy the perusal of our readers, we extract the following on the efficacy of strychnia in the treatment of dyspepsia.

Strychnia acts not only as a bitter, but possesses other valuable properties in dyspepsia.

It need hardly be urged that this energetic drug requires to be cautiously administered, but its effects will amply repay the care. Speaking from extensive experience, I know no single medicine of more value in this disease. Strychnia is particularly indicated in dyspepsia attended with nervous debility. In that numerous class of cases in which abnormal sensations in various parts of the body—as the throat, the head, or the limbs—are experienced, it will generally be found useful. It is the best tonic for the class in which mental symptoms predominate. But it also possesses excellent local effects, and acts by increasing the tone of the muscular coats of the stomach and intestines. When these coats are relaxed, gases are generated, mainly owing to retardation of the aliment in the cavities. No remedy has in my hands proved so permanently effectual as strychnia against this inconvenience. In the case of a gentleman who suffered most severely from sudden and almost daily accumulation of gas in the stomach and bowels, these attacks were attended with great mental oppression; often by fits of crying. The symptoms, in fact, resembled those of hysteria very closely. I mention the case particularly on account of its severity, and because the patient was cured by strychnia; and some time has now elapsed without a return of the attacks.

Strychnia should always be given in solution for the sake of its more effective diffusion in the stomach, and for the sake of greater certainty in apportioning the dose. A proportion of some acid, as a dram of dilute acetic acid to a grain of strychnia, should be prescribed with it, as the action of strychnia is greatly favored by association with acids. The discrepant accounts given of it, in all probability depend on different degrees of acidity in the stomachs into which solid strychnia was introduced. As a bitter tonic, the fortieth part of a grain is a sufficient dose. When it is desired to insure specific action, the twentieth part of a grain may be given; but it will seldom be necessary to exceed this, as the good effects of strychnia on the gastro-intestinal muscular fibres are usually secured by a quantity that does not affect the voluntary muscles. A solution of strychnia of definite strength that will keep, which that made with acid will not do so, is a desideratum in the forthcoming national pharmacopœia.

A preparation of citrate of iron and strychnia has lately been introduced, but it has no claim to be regarded as a chemical compound. It is simply a useful mixture; but the variable proportions adopted by the makers, within my own knowledge, ranging from one part of citrate of strychnia in ninety parts, to one part in one hundred and fifty, is highly objectionable.—*Braithwaite's Retrospect.*

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Selections.

Bismuth in Gleet and Leucorrhœa.—M. Gaby, of Paris, says: Repeated trials have convinced me that injections of oxyde of bismuth constitute the very best treatment of gleety discharges. Thirty parts are suspended in two hundred of rose water, and so injected as to leave as large a deposit of the salt as possible in the canal. Three injections per day should be employed at first, and then fewer. He has collected forty-three cases thus treated with success, five of which he briefly relates. Urethral discharges, unconnected with gonorrhœa, as observed in certain diatheses, in masturbation, venereal excesses, etc., and increasing in quantity, even after pure connection, have been successfully treated by this means in three instances.

Balanitis and balanoposthitis, and herpes præputialis yield rapidly to bismuth, applied in powder, after cleansing the part, and then covering with cotton. The various forms of vulvar leucorrhœa may be treated with bismuth. (One of these is entirely confined to the vulva, whether appearing as a consequence of follicular vulvitis, or without previous inflammatory symptoms. The latter is often met with in little girls.) Pregnancy, want of cleanliness, masterbation, worms, or contusion, are among the exciting causes. After removing all complication, the bismuth acts upon the discharge like a specific.

In the leucorrhœa of girls, powdering with bismuth is an excellent remedy. In ordinary vaginal leucorrhœa, occurring in women otherwise healthy, and having no other disease of the genito-urinary organs, the bismuth succeeds well.

Urethra-vaginal leucorrhœa, is almost always of infectious origin. In several instances reported, it yielded to bismuth after obstinately resisting other remedies. It is to be remembered that all the cases in which bismuth is useful are of the chronic description, and that pain and other signs of acute inflammation, contra-indicate its employment.—*North American Medical Reporter.*

Traumatic Tetanus.—B. D. Carpenter, M. D., of Suffolk Co., New York, reports in the *New York Journal of Medicine*, sixteen cases of this disease which have fallen under his observation. It has been his unparalleled good fortune to see fifteen of them recover. The treatment mostly relied upon was Dovers' powder, five to eight grains every three or four hours, and application of ice to the head and spine. He attributes the recovery to the ice mainly. Its employment was suggested to him by having noticed recoveries in horses from lockjaw by exposure to cold rains.—*Louisville Medical News.*

Dysentery and Diarrhœa.—Dr. O. C. Gibbs, in his summary in the *American Medical Monthly*, commenting on an article by Professor Cooper, of San Francisco, makes the following judicious remarks:—

> "We must protest against the consideration of *dysentery and diarrhœa* together, as does Prof. Cooper, as though they were allied diseases, requiring identical, or, at least, similar treatment. Cathartics, of a certain character, are always appropriate in a pure case of dysentery, while they are only judicious in a few exceptional cases of diarrhœa—astringents are seldom, or never called for in dysentery, while they are nearly always appropriate in diarrhœa. It is no uncommon error for careless practitioners to confound dysentery with diarrhœa, and treat with powerful astringents, with the hope of lessening the frequent desire to go to stool. We consider this a very grave error, and allude to the subject here, because teachers of medicine, more than all others, should draw a well-defined pathological and therapeutic line between the two diseases referred to." J. S. W.

Solution of the Perchloride of Iron.—At the suggestion of a friend, we have tried this article with decided advantage, in several cases, when troubled with hemorrhage from the gum, attendant upon the excavation of decay from cavities running down to or below the necks of the teeth. Applying a small pledget of cotton, saturated with the preparation, to the bleeding surface, the hemorrhage is completely arrested, and the operation of filling can be effected at once. As this is one of the most powerful astringents in the materia medica, both when administered internally and externally, it should be had recourse to in profuse hemorrhage following the extraction of teeth. Several practitioners have already testified to its value under such circumstances.

Remedy for the Hoarseness of Singers.—For five or six days to drink twice a day five or six drops of nitric acid in a glass of sugar and water. If the organ has become accustomed to the use of the remedy, and it, in consequence, has lost its original efficacy, we can increase the dose of the acid to ten or eleven drops. This receipt was given to us by an artist to whom it had rendered special service, who requests us not to publish his name, but who we may assure our readers is the first tenor of the age.—*L'Abeille Medicale.*

Sulphate of Copper with Opium in Diarrhœa from Teething.—Among other therapeutical news, we notice, in a recent number of *Schmidt's Jahr bücher*, the following formula, which Prof. Eisenmann, of Wurzburg, has found very efficient in diarrhœa of children from teething, viz.:—Cupri sulphat. one quarter grain; pulv. opii. three quarters of a grain; pulv. sacch. q. s. Three times daily one such powder.—*St. Joseph Journal of Med. and Surg.*

SNAKE BITES.—Dr. W. D. Johnson, of Hernando, Mississippi, reports, in the New Orleans *Medical and Surgical Journal*, (July,) his experience with tobacco and alcohol, as antidotes in the bites of poisonous reptiles and insects. He has used tobacco both externally and internally, combined, however, with free alcoholic stimulation. The tobacco produced nausea and vomiting in every case in which it was resorted to. Dr. Johnson regards either as efficacious when administered in time, and both together more prompt than either separately. He considers the patient as safe when nauseated or intoxicated, and proposes the internal administration of alcoholic stimulants, and the local application of tobacco, either as cataplasm, decoction, or infusion, as the best treatment. The local application of the tobacco greatly relieves the pain consequent on the swelling, and tends to arrest the swelling itself.

A NEW TREATMENT FOR ASTHMA.—Dr. Courty, a professor of the Medical School of Eontpelier, France, has been treating asthma by subcutaneous injections of a solution of the sulphate of atropine over the course of the pneumogastric nerve. He makes a puncture of the inner edge of the sterno cleido-mastoid muscle, directly over the sheath of the great vessel of the neck, by means of a trocar, and then injects a few drops of the solution, so that it may come in contact with the sheath of the great vessels. His experiments are reported to have been remarkably successful.

To counteract the specific effects of the atropine, Dr. Courty administered opium with success.—*Pa. Med. and Surg. Rep.*

USE OF THE CASTOR OIL PLANT AS A GALACTAGOGUE.—Dr. Routh exhibited three preparations of castor oil leaves, a tincture and a liquor (dose of each, one dram), and an extract, (dose, five grains). The leaves were obtained from Australia; and the drugs had been prepared by Mr. Greenish, of New Street, Dorset Square, where they could be procured. Dr. Routh had read a paper on the subject of the galactagogue effects of this plant, the leaves of which, applied to the breasts as poultices, and as fomentations to the vulva, for three days at intervals, were used in Boa Vista, to induce milk in the breasts of any woman within catamenial ages, but particularly if these women had borne children, to produce milk. The milk, once produced, could be perpetuated by the simple irritation produced at the nipple by the suction of a child. These facts, related by Dr. McWilliams, had been confirmed in part by Dr. Tyler Smith. Dr. Routh had published his experience on the subject in a series of papers in the *Medical Times and Gazette* of this year. To lying-in women with a deficiency of milk, he had given the infusion, in combination with couger-eel soup; and the effect in determining a copious flow of milk has been remarkable. He had administered the extract to unmarried women within catamenial ages, and the effect had been to produce intense pain in the breasts; but, as he could not find anybody, in that case, who would try the effect of a child, he had not yet induced milk in the breasts of such; but, after three or four days, the symptoms were relieved by a copious leucorrhea. As it was possible that a larger experience of this remedy might enable us to convert some married women (within catamenial ages) into wet nurses, and as it undoubtedly acted as a powerful lactagogue in suckling women, he was anxious that others also should experiment, and therefore to direct them where it could be procured.—*Brit. Med. Jour.*

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Pharmacy.

TO MAKE A BLISTER.

Steep cantharides in æth. sulph. for a fortnight, or until the cantharides float upon the surface; skim it off. One dram of cantharides, one dram of white wax, five drams of olive oil, melted together, mix. With a brush paint it over some white bibulous paper, and hang it up to dry in a current of air. Take a piece of pink paper, form and size required, and paint the uncolored side over with a weak solution of india rubber; cut your cantharides paper the form and size (less a margin) of the pink paper—while the India rubber solution is still sticky place it on; when dry roll it up. It is unaffected by damp, is light, portable, blisters with certainty, and without pain. The introduction of the caoutchouc varnish, arrests the perspiration of the part and increases doubly the certainty while diminishing the time required for application. Before applying, the blister should be held over the steam of hot water. The blister will be effectual for several times.—*Dublin Hosp. Gaz.*

QUINIO OR ROUGH QUININE.

By M. Batka.

A substance is known in the Brazils under the name of quinio, which is extracted from the fresh bark of the cinchona by lime, and then from the lime by alcohol. It is very rich in quinine, and it is only necessary to boil it with dilute sulphuric acid to obtain an abundant crystallization of pure sulphate of quinine. Quinio is a yellow body of a resinous appearance and of a bitter taste. It is insoluble in cold, and but slightly soluble in boiling water. It is very soluble in alcohol and ether, separating partially from the latter by exposure to the sun. Water precipitates the alcoholic solution. It is almost entirely soluble in weak sulphuric acid, from which soda precipitates it of a dirty white color, the precipitate assuming the appearance of a resin. A beautiful white sulphate, however, may be prepared from it. Quinio is free from cellulose; when heated it gives off an odor something like cinnamine; and burnt, leaves a light residue of carbonate of lime. It resembles a good deal the quiniodine of Liebig, but is much purer than quiniodine of commerce.—*Dublin Hospital Gazette.*

FORMULÆ FOR THE ADMINISTRATION OF PERCHLORIDE OF IRON.

By Dr. Deleau.

SYRUP.

Normal solution of perchloride of iron	10 grammes.
Syrup	490 "
Peroxide of iron, hydrated	q. s.

Each spoonful of this syrup contains twelve centigrammes of perchloride of iron.

PILLS.

Normal solution of perchloride of iron	5 grammes.
Powder	q. s.
Hydrated peroxide of iron	q. s.

Make one hundred pills, containing each one, twenty-five milligrammes of perchloride of iron.

INJECTIONS.

Normal solution of perchloride of iron	8 grammes.
Water	250 "
Hydrated peroxide of iron	q. s.

The liquid must be agitated from time to time, to avoid the acidification of the solution.

POMATUM.

Normal solution of perchloride of iron	8 to 24 grammes.
Lard	30 grammes.
Oil of sweet almonds	q. s.
Hydrated peroxide of iron	q. s.

SPARADRAP.

Concentrated solution of isinglass	120 grammes.
Normal solution of perchloride of iron	30 "
Hydrated peroxide of iron	q. s.

NORMAL SOLUTION OF PERCHLORIDE OF IRON.

Hydrochloric acid	q. s.
Hydrated peroxide of iron	q. s.

Combine the peroxide of iron with hydrochloric acid; when the solution is complete boil a few minutes and filter; evaporate till the solution marks 24° when it is boiling, and 30° cold. This solution contains half of its weight of perchloride, and it is the one used for all preparations named above.—*Journal de Chimie Medicale.*

PROPYLAMIN IN RHEUMATISM.

By Dr. Awenarius.

Propylamin,	20 drops.
Distilled water,	180 grmmes.

Add, if it is necessary,

Oleosaccharate of peppermint,	8 grammes.

Dose--One spoonfull every five hours.—*Jour. de Chimie Medicale.*

ON THE PREPARATIONS OF IODIDE OF MERCURY AND IRON.

By Mr. Ch. Chamouin.

SYRUP OF IODOHYDRARGYRATE OF IODIDE OF IRON.

Biniodide of mercury,	1 gramme.
Syrup of protoiodide of iron,	3000 “

Thirty grains of this syrup represents 0.01 of bi-iodide of mercury, combined with the same quantity of protoiodide of iron.

PILLS.

Solution of protoiodide of iron,	30 grammes.
Biniodide of mercury,	1 “

Reduce to the half; add ten grammes of honey; powder q. s., to make one hundred pills.—*Journal de Chimie Medicale.*

LIQUID WITH THE ARSENITE OF BROMIDE OF POTASSIUM.

By Mr. Ch. Clemens.

Arsenious acid,	4 grammes.
Pure carbonate of potash,	4 “
Dissolve in distilled water,	372 “
Add, pure bromine,	8 “

Shake several times the first week. After one month it is colorless, and good to be used. Dose—three or four drops in a tumbler of water, once or twice a day.—*Annales Medic. de la Flandre Occidentale.*

OIL WITH IODIDE OF AMMONIUM.

Iodide of ammonium,	15 centigrammes.
Olive Oil,	30 grammes.

Against the syphilitic pains.—*Jour. de Chimie Medicale.*

PILLS OF IODIDE OF AMMONIUM.

Iodide of ammonium,	1 gramme.
Mucilage,	3 “

Make twenty pills. Dose—One to three, in syphilis and scrofula—*Journal de Chimie Medicale.*

POTION AGAINST DYSENTERY.

Hydrochloric acid, pure,	1	gramme.
Perchloride of iron, pure,	1	"
Water of orange flowers,	60	"
Syrup,	60	"
Thebaique syrup,	30	"

A spoonful every two hours.—*Journal de Chimie Medicale.*

SNUFF AGAINST THE CHLORO-AMENIA.

Powder of ignatia beans,	0.06
Lactate of iron or powder of iron,	0.18
Rhubarb,	0.18 a 0.24
Oleosaccharate of peppermint,	0.36

Mix. Take two packages a day.—*Bulletin de Therapeutique.*

PROF. MULDER'S METHOD TO DETERMINE THE PERCENTAGE OF ALCOHOL IN WINES.

By B. Festner.

The description of this method, as given on page 131 of this volume, is susceptible of an important improvement and explanation.

There are two modes of obtaining the desired result, both of which I will shortly describe. Supposing a wine to possess at 50° Fahrenheit a specific gravity =0.9953. A certain volume accurately measured, is evaporated in the waterbath, with the proper precautions against loss, until no more spirituous odor is perceptible, when the former bulk is again made up by the addition of distilled, or better, ice-water, and the specific gravity again taken when the liquid has the same temperature as before, i. e. 50° Fahrenheit, supposing it to be =1.0080.

1. Since the loss of alcohol has raised the weight of the liquid by 0.0127, it follows that this quantity of alcohol had lowered the specific gravity of wine by 0 0127, and would have lowered that of pure water to 0.9873, which by referring to the alcoholometric tables, will be found to be that of a mixture of alcohol and water, containing 9.3 per cent. of the former.

2. We arrive at the same result more directly by considering first that, as the specific gravity of the liquid resulting from the evaporation, is 0.0080 higher than that of pure water, owing to the presence of extractive matter, it follows that the specific gravity of the original wine, if free from extractive, would be 0.9953 less 0.080=0.9873, which is the specific gravity of a mixture of alcohol and water, containing 9.3 per cent. of the former.

This method requires very accurate hydrometers and thermometers to give correct results, A hundred-dram bottle and an accurate balance is preferable to the 1000 grains bottle, because a slight error in the weight would not effect the result in an equal measure.—*Druggists' Circular.*

SYRUP OF LACTUCARIUM.

Fluid ext. of Eng. lactucarium,	1 fluid dram.
Sugar,	30 ounces, (offic.)
Water,	18 fluid ounces.
Distilled orange flower water,	2 " "

Triturate the fluid extract with a portion of the sugar, then dissolve this and the remainder of the sugar in the water by the aid of heat, strain, and when nearly cold add the orange flower water. If the fluid extract of German lactucarium is used, the proportion should be increased, probably about 25 per cent., although we have no evidence founded upon experiment as to the relative therapeutic value of the two commercial varieties.

We have not referred particularly to the process of M. Gustin, in which water acidulated with nitric acid is the menstruum, as we cannot conceive of this furnishing a fair representative of lactucarium, nor to the formula of our colleague, T. S. Wiegand, in which the use of carbonate of potassa is directed; this is particularly adapted to English lactucarium, and furnishes a strong preparation but not an elegant one, a characteristic which is fatal to its general adoption.—*Amer. Jour. Pharmacy.*

DENTAL NEURALGIA.

M. Balloy prescribes for this:—

Acetate of morphia,	gr. iss.
Acetic acid,	gr. ij.
Eau de Cologne,	ʒ ij.

To be dropped on cotton or wool and placed in the ear on the painful side.

Editorial.

American Pharmaceutical Association.—The eighth annual meeting of the American Pharmaceutical Association, will take place in the city of New York, on Tuesday, the 11th day of September next, at 3 o'clock, P. M.

The objects of the Association and the conditions of membership are explained in the following extracts from the Constitution:—

ARTICLE I.

This Association shall be called the American Pharmaceutical Association. Its aims shall be to unite the educated and reputable Pharmaceutists and Druggists of the United States in the following objects:—

1st. To improve and regulate the drug market, by preventing the importation of inferior, adulterated or deteriorated drugs, and by detecting and exposing home adulteration.

2d. To establish the relations between druggists, pharmaceutists, physicians, and the people at large upon just principles, which shall promote the public welfare and tend to mutual strength and advantage.

3d. To improve the science and the art of pharmacy by diffusing scientific knowledge among apothecaries and druggists, fostering pharmaceutical literature, developing talent, stimulating discovery and invention, and encouraging home production and manufacture in the several departments of the drug business.

4th. To regulate the system of apprenticeship and the employment so as to prevent, as far as practicable, the evils flowing from deficient training in the responsible duties of preparing, dispensing, and selling medicines.

5th. To suppress empiricism, and as much as possible to restrict the dispensing and sale of medicines to regularly educated druggists and apothecaries.

ARTICLE II.—OF THE MEMBERS.

Section 1. Every pharmaceutist or druggist of good moral and professional standing, whether in business on his own account, retired from business or employed by another, who, after duly considering the objects of the Association and the obligations of this Constitution. is willing to subscribe to them, is elligible to membership.

Section 2. The mode of admission to membership shall be as follows: Any person elligible to membership may apply to any members of the executive committee, who shall report his application to the said committee. If after investigating his claims they shall approve his election, they shall at the earliest time practicable, report his name to the association, and he may be elected by two-thirds of the members present, on ballot. Should an application occur in the recess, the members of the committee may give their approval in writing, which, if unanimous, and endorsed by the president, shall constitute him a member, and the fact be reported to the association at the next succeeding meeting.

Section 3. No person shall become a member of this association until he shall have signed the Constitution, and paid his annual contribution for the current year. All persons who become members shall be considered as permanent members, but may be expelled for improper conduct by a vote of two-thirds of the members present at any annual meeting.

Section 4. Every member shall pay into the hands of the treasurer the sum of two dollars at his yearly contribution, and is liable to lose his right of membership by neglecting to pay said contribution for three successive years. Members shall be entitled, on the payment of three dollars, to receive a certificate of membership, signed by the president, vice-president, and secretary, covenanting to return the same to the proper officer on relinquishing their connection with the association.

Section 5. Every local Pharmaceutical Association shall be entitled to five delegates in the annual meetings, who, if present, become members of the association on signing the Constitution, without being ballotted for.

Pharmaceutists and Druggists desirous of membership, can make application to any of the officers, or obtain any information from them respecting the association. Applications for membership should be in the hands of the executive committee at the opening of the first session. Reports of committees, and papers presented for publication, should be written only on one side of the paper, and corrected for the printer. All interested in the objects of the association are invited to co-operate.

SAMUEL M. COLCORD, *President*

MASONIC REVIEW—Cincinnati, contains much interesting matter, particularly devoted to a consideration of the usefulness of that institution. This is an old and established magazine, and should be sought by those associated with that fraternity. Published monthly, by C. Moore, 171 Walnut Street, Cincinnati.

EPILEPSY.—We have received from Prof. D. L. McGugin a treatise, embracing the history, pathology, and treatment of epilepsy, which will soon be issued in pamphlet form. Dr. McGugin's long experience in the treatment of this disease, entitles his suggestion to the consideration of those who have cases of this kind under treatment.

RANKIN'S HALF-YEARLY ABSTRACT OF MEDICAL SCIENCES—The number for July is replete with valuable and interesting matter. It contains 275 pages —price $1.00 per number; being a practical and analytical digest of the contents of foreign and American journals. It gives to the profession a larger amount of information than can be obtained in any other way for the same cost.

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Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER X.

We have now considered some of the most important indigenous tonics, and pointed out their special uses and best modes of administration; the list is numerous enough, perhaps, for all practical purposes, and yet, in accordance with the plan laid down in our programme, it is proper to briefly consider a number of other articles belonging to the same class: though our knowledge of their peculiar effects is comparatively limited.

MENISPERNUM CANADENSE.

The natural order, *menispermaceæ*, includes eleven genera, two thousand one hundred and seventy-five species, most of them natives of tropical Asia and America; but it embraces only one northern genus, viz., the *menispernum.* The Canadian moonseed or yellow parilla, is a climbing plant, growing in various parts of the United States, from Canada to the Gulf of Mexico, on the banks of streams; leaves peltate, drupes black with a bloom, ripening in September, and looking like frost-grapes.

The root, which is the part employed, is of a yellowish color, and a strong bitter taste. It contains a peculiar bitter principle, *menispermin*, which is soluble in water; also, a resin soluble in alcohol, together with gum, starch, sugar, &c.

This plant has been found to be one of our best and most reliable indigenous tonics, being employed most extensively in the middle States, both in domestic and regular practice, in the cure of scrofula and other cachectic affections. As a gently stimulating tonic alterative, it has been found well adapted to chronic cutaneous, and other diseases dependent on a vitiated and deteriorated state of the blood; and as it possesses diuretic and laxative properties, it has been used successfully in cases of hepatic torpor, with constipation. As an alterative depurant, tonic, it deserves to occupy a high rank, promoting all the excreting functions, and favoring the metamorphosis of the tissues; while, at the same time, it increases the tone of the digestive organs, and the assimilating function. We would recommend the trial of this remedy in scrofulous and anemic conditions, in combination with iron; also, in chlorosis and chronic disorders of the genito-urinary system, as cystitis, phosphatic deposits, &c.

The only preparation of this plant which we have found in the shops, is the *menispermin*, prepared at the laboratory of B. Keith & Co., New York. It seems to be the powdered resinoid and alkaloid, or bitter principle, mixed, perhaps, with some other substance. It is a pure, and not unpleasant bitter to the taste, without acridity, and of a deep brown color. The dose is from two to five grains three times a day; the larger quantity if a laxative effect be required. We believe it to be a useful and reliable preparation. It may be given in form of pill, combined with iron, by hydrogen. The botanists combine it with stillingin, senecin, helonin, &c.

SCUTELLARIA LATERIFLORA.

(*Blue Scullcap—Mad Dog Weed, &c.*) Natural Order, *Labiatæ;* Linnean System, *Didynamia Gymnospermia.*

This well-known, indigenous, perennial herb has an erect, branched, quadrangular, smooth stem, one or two feet high, with ovate leaves, and small, pale blue flowers. It grows in moist places, by the sides of ditches and ponds all over the Union. It has no very sensible properties in its green state, either as to taste or smell, hence generally supposed to be inert. Most, if not all the other labiate plants have aromatic properties, dependent on an aromatic oil.

This plant has enjoyed a wide spread reputation as a preventive of hydrophobia, in cases of mad-dog bites, but has now gone out of use as a prophylactic against canine madness. Recently it has come into considerable repute as a valuable nervine, with tonic properties, acting also as a diaphoretic and diuretic. From what experience we have had in the use of this plant, we have formed a very favorable opinion of its virtues as an antispasmodic, quieting the nervous system, and at the same time promoting the appetite and giving tone to the system generally. We have known it to prove useful in nervous irritability, dependent on debility; also, in hysteria and painful menstruation. It is said to have been used successfully in chorea, and some forms of convulsion. It has been recommended in neuralgia and tic douloureux; also, in fevers, to abate delirium and cerebral excitement, as well as to act as a febrifuge, but it is very doubtful whether it is well suited to such cases. In the stage of convalescence it would probably prove beneficial. The *fluid extract* of scutellaria is now kept in the shops, of Tilden's manufacture, and will be found to contain all the virtues of the plant. Dose, from half to one dram. The *compound fluid extract* is composed of *scullcap*, *ladies' slipper*, *hop* and *lettuce*, and is a very efficient nervine and tonic, in the same doses. We have, also, *scutellarin*, from the laboratory of the Tilden's and Keith & Co. The first is a dark colored powder, resembling Scotch snuff, of a mildly pleasant bitter taste, and is given in doses of from two to six grains. The latter is of a lightish yellow color, resembling the resinoid, *hydrastin*, and like that of a very bitter, saline taste. If this is the "resin, resinoid and neutral" principle of the scullcap, and nothing else, then no one can deny that the plant has very strongly marked sensible properties. These preparations have nearly displaced the *infusion*, which is made with an ounce of the dried plant, or the fluid extract to one pint of water. Dose, a wine glassful three times a day.*

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* There are nine other species of scutellaria, some of which possess very strongly marked tonic properties, and are intensely bitter, as the *S. integrifolia.*

POPULUS TREMULOIDES.

American Poplar—White Poplar—Upland Poplar. THE BARK.

The American poplar or aspen, belonging to the natural order Salicaceæ, or willow family; sexual system Dioceia Octandria, is closely allied in botanical habit and medicinal properties to the different species of salix already described. The genus includes six indigenous species, among which are the famous cotton wood, of the west, and the balsam poplar, or tacamahac, whose large buds are varnished with a fragrant resinous matter. The Balm of Gilead (*P. candicans*,) is a variety of the latter.

The bark and leaves of the American poplar contain a peculiar bitter alkaloid, *populin;* also, *salacin*, together with starch, gum, resin, and a *peculiar volatile oil.* The two latter are most abundant in the buds. The *populin* is very light, purely white, and of a bitter sweetish taste, somewhat like that of liquorice. When heated it melts into a colorless and transparent liquid. It is soluble in two thousand parts of cold and seventy parts of boiling water; and is more soluble in boiling alcohol. Acetic acid and the diluted mineral acids dissolve it, and upon the addition of an alkali let it fall unchanged. The resin is sometimes erroneously called *tacamahac.* The salacin is obtained in the manner already pointed out under salix.

The therapeutical properties of the populin are supposed to be nearly, if not quite identical with those of the willow. As an antiperiodic, it has been used successfully in the treatment of intermittents; and also as an ordinary tonic, where such remedies are indicated. We have good reason for believing that its tonic properties are considerably superior to those of the salix, especially its antiperiodic power, and that there are few indigenous tonics superior to it in a certain class of cases, especially intermittents. As a stomachic tonic, the tincture has been extensively used in domestic practice, and with satisfactory effects; also, as a vermifuge. It is thought by many to possess decided alterative properties, and those who have watched its effects closely, consider it diuretic, diaphoretic and a general depurant. It has been strongly recommended in jaundice, and in suppression and retention of urine, but further trials are needed before its efficacy in these affections can be admitted. It meets all the indications of the simple bitters.

The populus has generally been used in the form of infusion, powder, tincture, *populin*, of the *P. balsamifera*, and the oil. The The *populin* of Messrs. Tilden's, Keith & Co., and other manufacturers, is now kept in the shops, and possesses many advantages over the other forms, especially as an antiperiodic. The dose is from four to eight grains. The volatile oil which is also in market, obtained from the buds of the *P. balsamifera*, has much the appearance of balsam Peru, and resembles turpentine in taste and medicinal properties. It is used with advantage in pectoral, nephritic and rheumatic complaints, in substance or tincture; and a liniment, made by incorporating it with sweet oil or lard has been found useful as an external application in rheumatism, &c.

The *unguentum populeum*, (*Lond. Pharm.*) for painful local affections as tumors, wounds and burns, is made by bruising in a mortar, and then boiling in lard the fresh leaves of black poppy, belladonna, hyoscyamus, and the solanum nigrum, then adding the buds of the poplar, digesting for twenty-four hours, and straining with strong expression. The buds are also employed as the basis of a balsam and tincture, used for colic, headache, &c. The resinous decoction of the buds of the *P. balsamifera* is collected in shells in Canada, and exported in considerable quantities to Europe, where it is in much repute as a diuretic and antiscorbutic. There is scarcely any doubt but that this substance will yet be found to be a useful substitute for the balsam of copaiba and the liquid turpentines.

Further experiments, also, with *populin* in intermittents are desirable; we believe it will prove successful in a majority of cases, equal if not superior to salacine, and can be manufactured much cheaper.

XANTHOXYLUM FRAXINEUM, (*Prickly Ash.*)

(*Natural Order*, Xanthoxylaceæ; *Lindley*, *Gray*;) *Sexual System*, Dioecia, Pentandria. THE BARK.

There are two species belonging to this well-known genus, indigenous to the United States, viz., *X. Americanum*, (Gray) and *X. Carolinianum*, or northern and southern prickly ash. The northern species is a shrub, from five to ten feet high, with alternate branches, which are covered with strong, sharp, scattered prickles. The plant is polygamous, some shrubs bearing both male and perfect flowers, others only female; it grows in moist and shady places, flowering in April and May, before the foliage appears.

Properties.—The bark is the officinal portion, though every part of the plant is endowed with the aromatic and active principles, the odor resembling that of the oil of lemons. The bark, as found in the shops, is in pieces more or less quilled, of a whitish color, internally somewhat shining with an ash-colored epidermis; very brittle, light, nearly or quite inodorous, and of taste, at first sweetish and slightly aromatic, then bitterish, and ultimately very permanently acrid. This acridity is imparted to boiling water and alcohol, which extract all the virtues of the bark.

Its active constituents are *volatile oil*, *a greenish fixed oil*, *resin*, *gum*, *coloring matter*, and a peculiar crystallizable principle, *xanthoxylin*. This is a neutral substance, whose properties have not been fully investigated. The leaves and fruit abound in volatile oil. Bigelow states the rind of the capsule is highly fragrant, imparting to the fingers, when rubbed between them, an odor much like the oil of lemons. The odorous portion is an essential oil residing in transparent vesicular points on the surface of the capsule, and about the margins of the leaves. The acrimony which resides in the bark, has its foundation in a different principle, being separated by decoction but not by distillation.

Medical Properties.—The prickly ash is a very valuable stimulating, alterative tonic and has been very justly compared to the mezereum in its physical and therapeutical properties. Though extensively used in domestic practice in chronic rheumatism, &c., it has not been as much employed in regular practice as it deserves; for it is unquestionably one of our most actively medicinal plants, as its sensible properties very plainly indicate. As a powerful and permanent stimulant in languid, torpid conditions, especially in patients of a lymphatic, phlegmatic temperament it deserves high eulogium; proving equal, if not even superior to guaicum and mezereum. When first swallowed it causes a sensation of heat in the stomach, followed by general arterial excitement, and a tendency to diaphoresis. Sometimes a pricking sensation is experienced throughout the body extending to the limbs, very similar to that caused by strychnia. It seems to rouse the organic nervous agency in a marked degree, and in consequence promotes the circulation throughout the whole capillary system, and this effect is not transient like that produced by the more diffusible stimulants, as alcohol and camphor. It is unnecessary to go into detail in regard to its application in different diseases; we have referred to chronic rheumatism as one affection, which, when chronic, has been often successfully treated by this plant. Dr. Bigelow states that he gave the bark of this shrub in doses of ten and twenty grains in this disease with considerable advantage, and that in one case it effectually removed the complaint in a day. Eberle, also, testifies strongly in its favor.

From facts which have come within our knowledge, we have no hesitation in saying that the prickly ash is a highly valuable medicine in secondary and tertiary syphilis; as an alterant, perhaps, more efficient and reliable than sarsaparilla, or most of the other vegetable alteratives usually prescribed in this disease. It is a powerful eliminant, exciting the whole secretory, excretory, glandular system, favoring metamorphic changes in the tissues, and acting as a general depurant. Syphilitic sores and malignant ulcers speedily assume a more healthy aspect under its internal and external use. In conjunction with alkalies, it is also a useful article in chronic cutaneous diseases and atonic gout; salivation sometimes follows its long continued use. In domestic practice this article is frequently employed, and often with prompt success, in the relief of flatulence and colic; also, as a useful emmenagogue, in the form of a warm decoction taken at bed time. In such cases we have found it more certain than rue, pennyroyal, or any other articles of the class. The peculiar principle, xanthoxylin, is very similar to piperine both in its physical and sensible properties, and its action as an antiperiodic. The xanthoxylum is regarded by some practitioners, and we believe by all who have made much use of it, as a very certain and valuable chologogue, exciting the action of the hepatic cells; doubtless, by promoting the capillary circulation in the organ, as it does in every other part.

Another important use of this plant is, in congestion of mucous surfaces, whether of the throat and fauces, vagina, urethra, or any other part. Here, from relaxation and want of tonicity, the coats of the vessels yield and become distended with blood. The indication is, to restore the healthy tone of the vessels. This is accomplished in many cases, at least, by the use of this article. Further observation is needed on this point, but enough is ascertained, to justify a more frequent resort to it in such cases. In low forms of fever the xanthoxylum has also been found a very important and valuable stimulant tonic. From its known physiological action, it would seem to be well suited to paralytic affections of a chronic nature, and to torpid conditions of the digestive and assimilating functions. We have heard, also, of its beneficial use in scrofulous diseases. It excites salivation, whether taken internally or applied locally.

Preparations.—Powder, infusion, decoction, fluid extract, xanthoxylin, tincture, oil.

The *powder* may be given in doses of from five to twenty grains, but it is not an elligible form for ordinary use, being open to the same objections as the powders of other vegetable substances.

The *infusion* is sometimes used, in the proportion of one ounce of the bark to one quart of boiling water; infuse in a covered vessel one hour and strain. Dose, from one to four ounces every four hours.

The *decoction* is prepared by boiling an ounce in three pints of water down to a quart; of which, a pint may be given, in divided doses during the twenty-four hours.

The *fluid extract* is one of the best forms for ordinary use. Dose, from fifteen to forty drops, in a tablespoonful of sweetened water.

The *xanthoxylin* of Tilden's manufacture, is the active principles obtained by hydro-alcohol in vacuo, and afterwards combined with sugar of milk. Dose, from two to six grains. This is well suited to the pilular form, each containing one grain. On account of the acrid taste, this form is often preferred.

The *tincture* is now replaced for the most part by the fluid extract. Dose, (concentrated) from five to ten drops.

The *oil of xanthoxylum* is prepared by B. Keith & Co., and is said to be a useful and reliable preparation. Dose, from two to five drops.

MAGNOLIA GLAUCA.

(*Magnolia—Small Magnolia—Sweet Magnolia—White Bay—Beaver Tree—Swamp Sassafras—Swamp Laurel, &c.*) *Natural Order*, Magnoliaceæ; *Linnean System*, Polyandria Polyginia.

The magnolia is universally recognized as one of the most admirable productions of the vegetable world. Certainly, among the numerous trees indigenous to our country, none are more conspicuous for the beauty of their foliage or the magnificence and delightful odor of their flowers. Six species belonging to this genus are found within the limits of the United States, all of which are highly ornamental, and all possess similar medicinal properties. Three of these are recognized by the U. S. pharmacopœia, viz., the *M. glauca*, *M. acuminata*, and *M. tripetala*, but the *M. auriculata*, *M. macrophilla*, and *M. grandiflora*, are equally deserving of notice. It is a somewhat remarkable fact, that no tree of this genus has hitherto been found indigenous to Europe, Africa, South America, nor Australia, and the geographical range of the order magnoliaceæ in America and Asia is comparatively limited For a botanical description of the three species above named, we would refer the reader to the U. S. Dispensatory, of Wood & Bache.

We may remark, however, that the *M. glauca* extends along the sea-board of the United States, from Cape Ann, in Massachusetts, to the shores of the Gulf of Mexico; being abundant in the middle and southern States, and but seldom met with in the interior of the country west of the mountains. The *M. acuminata*, (*cucumber tree*) is found in the mountainous regions in the interior of the United States, extending along the Alleghanies from the State of New York to their termination in Georgia, being seldom found in the low country far either to the east or west of this range. The *M. tripetala*, (*umbrella tree*) extends from the northern parts of New York to the southern limits of the United States; being only found in situations which are shady, with a strong, deep and fertile soil.

The bark is the part used in medicine, that of the root being generally preferred, although that of the trunk and branches is said to be equally powerful. It has an aromatic odor, and a bitter, pungent, spicy taste. The source of the aromatic property is a volatile oil, which is diminished by desiccation, and entirely lost by age, or keeping any considerable time. The bitterness, however, remains. The fragrance of the flowers is highly agreeable to most persons, while to others it is not only unpleasant, but absolutely deleterious, causing faintness and impeded respiration.

No analysis has as yet been made of the bark of any species of the magnolia, except the grandiflora, which was found by Dr. Procter to yield a gum resin, a volatile oil, and a peculiar crystallizable principle, analogous to *liriodendrin*, (*Am. Jour. Pharm.* viii., 89.) There is little doubt that the bark of the other species, would yield the same constituents, as the sensible properties are similar. In regard to the medical uses of magnolia, it may well be ranked among our most useful indigenous tonics. The aborigines employed it extensively against rheumatism and autumnal intermittents, using the warm decoction as a sudorific and laxative, and the cold infusion as an antiperiodic. Perhaps there is no indigenous article on which greater reliance is placed, in many parts of our country, in the treatment of intermittents, as well as remittents having a typhoid character, than the magnolia, it being not only widely used in domestic, but also in regular practice. As a stimulating tonic and diaphoretic, it closely resembles the liriodendron, as they are, also, closely connected in botanical habit, and belong to the same natural order. Of the two, however, the magnolia is most grateful to the stomach, and probably, equally, if not more efficient. This applies, of course, only to those preparations in which the volatile oil is contained. The tincture of the cones and seeds is a popular remedy at the south in the treatment of chronic rheumatism, as well as a prophylactic against intermittent fever, and is doubtless applicable to most cases where the tonic indication is present. It forms an excellent substitute for the cascarilla and canella, combining, as it does, similar aromatic stimulant and tonic properties. Porcher states that the leaves, infused in brandy, or a decoction of them are valuable in pectoral affections, recent colds, &c. That it is suited to cases of inflammatory gout, as claimed by Barton, may well admit of doubt, but that it might prove beneficial in chronic cases is very probable. The seeds of the *M. grandiflora* are said to be employed with success in paralysis, and in Mexico this is a very common remedy, and one in which much reliance is placed.

It is a prevalent notion in the southern States that the magnolia prevents the water of bogs and marshes from generating malaria; a property which is also attributed by Dr. Cartwright, of Natchez, to the *jussiaea grandiflora*, which he remarks "purifies all stagnant water in which it grows—that of the lakes and bayous inhabited by it being as pure to the sight, taste and smell, as if it had just fallen from the clouds." This statement, however, needs confirmation.

The preparations of the magnolia are the powder, infusion, tincture, fluid extract, and magnolin. The dose of the recently dried bark in powder, is from half a dram to one dram, frequently repeated. The infusion, made by one pint of boiling water to one ounce of the coarsely bruised bark, in a covered vessel, may be given in the dose of two to four ounces, repeated according to circumstances. The tincture is made by macerating the fresh bark or cones in brandy. Dose, one to three drams. The fluid extract, not yet in market, would be the most eligible form, and may be given in the same doses as the tincture. As an antiperiodic in intermittents, this well deserves a trial. The magnolin, the neutral bitter principle, is not yet manufactured in quantity sufficient to be introduced into medicine, It will, doubtless, hereafter rank among our most important therapeutical agents.

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Hypophosphites.

[CONCLUDED.]

Hypophosphorous acid.—So far as I am aware, this acid has not been prescribed in a free state, but it is highly probable that it may come into use. Any claims which phosphoric acid may possess as an agent to supply the waste of phosphorus and phosphates in the human economy, will be more than equalled by this acid. Hypophosphite of baryta is the salt which is most eligible for the preparation of this acid, but it is convenient to prepare it from the lime salt, viz:—

Take of Hypophosphite of lime, - -	**480 grains.**
Crystallized oxalic acid. - -	**350 "**
Distilled water, - - - -	**9 fluid oz.**

Dissolve the hypophosphite of lime in six ounces of the water and the acid in the remainder, with the aid of heat; mix the solutions, pour the mixture on a white paper filter, and when the liquid has passed, add distilled water carefully, till it measures ten fluid ounces, and evaporate this to eight and a half fluid ounces.

The solution thus prepared contains about ten per cent. of terhydrated hypophosphorous acid (HO+2HO,PO), a teaspoonful representing six grains of the acid, which contains two and a quarter grains of phosphorus. The dose of this acid solution will probably vary from ten minims to a teaspoonful.

Hypophosphite of Manganese.—A preparation containing this salt having been prescribed, it is appropriate to mention it in this place, though, as it is not sold in a separate state, it need not be separately treated of in this place, (See *Syrup of Hypophosphite of Manganese.*)

Hypophosphite of Quinia.—This elegant salt introduced to notice by Prof. J. Lawrence Smith, of Louisville, Ky., is made with facility by dissolving one ounce sulphate of quinia in water, by the aid of diluted sulphuric acid, then precipitating the alkaloid with ammonia, washing, digesting in hypophosphorous acid with heat; the quinia in excess, after filtering, it evaporates spontaneously till it crystallizes. It may also be made by double decomposition between hypophosphite of baryta and sulphate of quinia. It is in elegant tufts of feathery crystals, soft to the touch, soluble in 60 parts of water, and more so in hot water. It loses water at 300°, melts and turns brown. Dose, one to five grains.

Eligible Combinations of the Hypophosphites.—The following preparations have all been suggested within a recent period as eligible combinations for administering these remedies. I also insert my own recipes, which have not before appeared in print.

Procter's Syrup of Hypophosphite of Lime.

Take of Hypophosphite of lime, - -	1 ounce.
Water, - - - - -	9 1-2 fluid ounces.
White Sugar, - - - - -	12 ounces.
Fluid extract of vanilla, - -	1-2 fluid ounce.

Dissolve the salt in the water, filter, add the sugar, dissolve by aid of heat, and add the vanilla. The dose is from a teaspoonful (three and a half grains) to a tablespoonful, (fourteen grains) according to the circumstances of the case, three times a day.

Procter's Compound Syrup of Hypophosphites.

Take of Hypophosphite of lime,	256	grains.
Hypophosphite of soda,	192	"
Hypophosphite of potassa,	128	"
Hypophosphite of iron,[*] (recently precipitated)	96	"
Hypophosphorous acid solution,	q. s. or 240	"
White Sugar,	9	ounces.
Extract of Vanilla,	1-2	ounce.
Water,	q. s.	

Dissolve the salts of lime, soda, and potassa in six ounces of water; put the iron salt in a mortar, and gradually add solution of hypophosphorous acid till it is dissolved; to this add the solution of the other salts, after it has been rendered slightly acidulous with the same acid, and then, water, till the whole measures twelve fluid ounces. Dissolve in this the sugar, with heat, and flavor with the vanilla.

Without flavoring, this syrup is not unpleasant.

Wm. S. Thompson's Syrup of Hypophosphites. (Containing the Protosalt of Iron.)

Take of Hypophosphite of lime,	256	grains.
Hypophosphite of soda,	192	"
Hypophosphite of potassa,	128	"
Protosulphate of iron, crystallized,	185	"
Carbonate of soda,	240	"
Hypophosphorous acid, sp. gr. 1.036,	3 1-2	fl. ounces.
Sugar,	12	ounces.

Dissolve the protosulphate of iron and carbonate of soda, each separately, in four fluid ounces of water, and mix the solutions. Wash the precipitated carbonate of iron thoroughly with sweetened water, and drain it on a muslin filter. Having placed the salts of lime, soda, and potassa in a suitable porcelain dish, add about two fluid ounces of water, and one fluid ounce of hypophosphorous acid; heat the mixture gently, and add the moist carbonate of iron, in small portions, from time to time, alternately with the hypophosphorous acid, until the solution is complete. Add water enough to make the whole measure ten fluid ounces; pour it into a bottle containing the sugar, and agitate as before.—*Jour. and Trans. of Maryland College of Pharmacy*, June, 1858.

Parrish's Syrup of the Hypophosphites.

The presence of preparations of iron in these compounds was not called for by the original discoverer of their therapeutic value, who considers the alkaline and earthy hypophosphites as superior to any of the ordinary "*hæmatogens*," and in practice, I believe the following very simple preparations have been found fully equal to those in which, *iron* is introduced with an excess of hypophosphorous acid.

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[*] This quantity, 96 grains, of hypophosphite of iron is obtained when 128 grains of hypophosphite of soda, dissolved in two ounces of water, is decomposed with a slight excess of solution of persulphate of iron, and the white precipitate well washed on a filter with water.

Take of Hypophosphite of lime,	℥ iss.
" soda,	℥ ss.
" potassa,	℥ ss.
Sugar, (com.)	℔j, 12 oz.
Hot water,	Oj f℥ iv.
Orange-flower water,	f℥j.

Make a solution of the mixed salts in the hot water, filter through paper, dissolve the sugar in the solution by the aid of heat; strain and add the orange-flower water. Dose, a teaspoonful, containing, nearly five grains of the mixed salts.

The *glycerole of hypophosphites* has the same composition as the foregoing, except that the solution is formed with a less proportion of water, to which a smaller portion of sugar is added, and the quantity made up with glycerin. We modify the flavor, also, by the use of a little oil of bitter almonds, to distinguish it from the corresponding syrup.

Some pharmaceutists omit the sugar altogether, and propose this course in making all glyceroles, using glycerin as the solvent, as well as for its nutritive and remedial properties. I do not find this to furnish a pleasant preparation to take, as the saline ingredients have, perhaps, as strong a taste in this form as in an aqueous solution, and in view of the acridity of glycerin as usually met with, I think a teaspoonful a pretty large dose, unless diluted more than is usual with such preparations as glycerole of the hypophosphites. The proportion of glycerin will be regulated also by the price to be charged for the preparation, which, to adapt it to common use, must be placed at some approximation to the usual price of medicines.

The cheaper kinds of glycerin must be avoided in this preparation, as from contact with the salts or other causes they are apt to acquire very offensive properties.

It remains to notice one or two preparations, which have been occasionally ordered, and of which no published formulæ as yet exist.

Syrup of Hypophosphite of Iron.

Take of Protosulphate of Iron, - - - -	185 grains.
Carbonate of Soda, - - - -	240 "
Hypophosphorous acid, (sp. gr. 1.036)	f℥ iijss or q. s.
Water, - - - - - - -	
Sugar, - - - - - - - -	12 ounces.

Dissolve the sulphate of iron and carbonate of soda, each separately, in four fluid ounces of water, and mix the solution. Wash the precipitated carbonate of iron thoroughly with sweetened water, and drain it on a muslin filter; then transfer to a dish, add a small portion of water, heat gently, adding hypophosphorous acid till it forms a clear solution; then add water till it reaches eight fluid ounces, and add the sugar and flavor to taste. This contains very nearly one grain of hypophosphite of protoxide of iron to the ounce.

The following has also been occasionally supplied for physicians prescriptions.

Syrup of Hypophosphite of Manganese.

Take of Sulphate of manganese, - - - -	240 grains.
Hypophosphite of lime, - - - - -	160 "
Water - - - - - - - -	Oj.
Sugar, - - - - - - - - -	℔ ij.
Orange-flower water. - - - - -	f℥ ss.

Dissolve the hypophosphite and sulphate in separate portions of water and mix; then wash the precipitate, evaporate to one pint, dissolve in this the sugar by the aid of heat, and add the orange-flower water. Dose, a tablespoonful, containing 2⅓ grains of hypophosphite of manganese.

The *medical properties* of the preparations dwelt upon in this chapter, of course, interest the physician more than the pharmaceutist. They have, however, become the subject of much general remark and discussion, and I have had abundant opportunities of learning the estimate put upon them by physicians and their patients.

The phosphates of lime and iron have long been known and occasionally used. The former, according to Dr. Pareira, "increases incontestably the presence of calcareous salts in the bones, the blood, and the urine," and is hence useful in rickets; and the latter, in addition to the well-known general effects of the ferruginous salts, has enjoyed a high reputation in Europe as an alterative, both internally and externally used.

The chief practical difficulty about the use of these preparations has been their insolubility, and their present popularity is undoubtedly due to their being scientifically combined with the alkaline phosphates, in such proportion as the study of the healthy secretions, and the normal composition of the tissues indicates, and, above all, their being in perfect solution in an eligible form, commending itself to the taste of the patient. The capability of assimilation of medicinal substances has long been known to depend greatly upon their state of division, and no degree of comminution of a solid substance seems so favorable to this object as perfect solution. That the so-called chemical food is a useful and elegant tonic, meeting a want constantly experienced by practitioners in treating chronic cases, is attested by thousands who have used it.

The value of the salts of hypophosphorous acid has been much more zealously called in question, but can no more admit of a doubt; the extraordinary claim set up by Dr. Churchill, of a specific property possessed by these salts of curing consumption, even after it has progressed beyond its incipient stage, is certainly not established by general experience, but there is a cloud of witnesses to the utility and singular efficiency of these remedies in the treatment of many cases of nervous and general debility and ill health.

This is not the place to dwell upon this subject, but the remarks here made may serve as answers to the numerous inquiries addressed to me by physicians, though they must be taken as the opinion of a pharmaceutist, whose position and pursuits do not qualify him to pronounce upon a purely therapeutical question.

Epilepsy.

EMBRACING ITS HISTORY, PATHOLOGY AND TREATMENT.

By D. L. McGugin, A. M., M. D.

The term here used, and which has been applied to the designation of a peculiar set of phenomena was derived from a Greek word, which being translated is rendered "I seize upon," and is expressive because of the suddenness and violence of the seizure.

The term, therefore, in familiar use is not expressive of the pathological condition which results in the production of the epileptic paroxysm, but rather conveys an idea of the manner, and the overwhelming character of it.

The occurrence is unexpected, and the manner of the individual so startling and frightful that the ancients were at a loss to attribute it to any other agency than the evil spirits, and that it was sent upon the person so afflicted as a punishment for some great crime or offence against the laws of their mythological deities.

Hippocrates, therefore, imbued with this error, regarded it as a sacred disease, because of the source of the affliction and the purposes and objects of the punishment. Nor was he alone in this superstitious belief, for Celsus, Arctcus and Pliny fell into the same delusion, and each named the disease after the source whence it emanated, or the God who had been particularly offended, and had visited the punishment upon the supposed offender. Paraselsus, too, followed suit and was governed by the senseless dogmas of the time.

It would be of little avail to give all the synonyms which have been in use, nor would it be particularly profitable further to trace its literature.

In order to a just and satisfactory investigation of the disease, and that nothing be omitted which shall be necessary to a proper conception of its nature, I shall pursue the analytic method, because better calculated to answer the purposes and objects of this enquiry. In adopting this course, the description will not be wholly overlooked.

Premonitions.—Those subject to attacks of epilepsy may be, and very often are, forewarned by certain symptoms, physical and mental, of an approaching seizure before there is an entire loss of consciousness. Sometimes just before the convulsive attack there is a perversion of the special senses, as of smell, by false and disagreeable odors, by a ringing sound in the ears, or bright lights like sparks passing before the eyes, and by the sensation of cold vapor in a stream towards the head or brain, when all consciousness is rapidly lost. Then there are noises in the intestines from flatus, sometimes an inability to retain the contents of the bowels, with unconscious dejections. In this case, the tone or persistent reflex power of the sphincters is temporally lost. Sometimes the veins of the neck are distended with blood, the carotid and temporal arteries evince increased activity; there are palpitations of the heart, vertigo, and melancholic reveries, and an increased secretion and flow of tears. The *aura epileptica* may begin in the face, the head, the uterus, the stomach, one or the other of the lower or upper extremities, or one or the other of the testicles. In other cases there are experienced slight spasmodic twitchings in the muscles of the face and the extremities, and painful sensations along the course of other muscles. Stupor and dullness are perceived by the friends of the patient; he is unsocial, acerbic, irritable and morose.

Sometimes there is an unusual exhilaration of spirits, and taciturnity yields to social enjoyment in free conversation, the appetite becoming keen and sometimes even voracious.

Sometimes there is ptyalism, diarrhea, nausea and vomiting, hysterical symptoms and wakefulness. A loud scream or a sudden sharp cry gives notice that the patient is seized with the paroxysm. If seized while standing he falls; if while sitting he loses his position upon the seat, and rolls to the ground in severe convulsive movements. The attention of the bystanders, or those more distant, who hear the sound occasioned by the fall is now attracted, who observe the sufferer, usually violently convulsed, or in some instances, slightly. In either case, if their nature was not understood, they are alarming, and in the more severe forms the manifestations are frightful. The eyes are seen to start and even to project forward, are permanently turned toward the nose, or they are in a tumultuous motion. In many cases the conjunctiva are injected with blood. The muscles of the face are violently spasmotized and distorted, rendering the expression truly hideous. The lips are thrown out, and often covered with frothy mucous, with blood admixed, the latter oozing from wounds inflicted by the teeth upon the tongue, and the angles of the mouth are drawn backward toward the ears, or a single corner may be thus distorted.

The lower jaw is brought closely to the upper, and held there in rigid contact by firm contraction. Oftentimes the tongue is included and consequently severely injured. The head performs a rotary movement by turning first to one side then the other, or it may be drawn persistently backward and maintained there with so much rigidity by the contracted cervical muscles, as to defy the exercise of all reasonable force to overcome it. The body is twisted, bends, rolls, or is fixed and sternly rigid.

The extremities are first strongly drawn, then forcibly and suddenly extended, and the toes and fingers are also drawn, particularly the thumb, which is brought into the palm of the hand. The diaphragm, the costal, and respirato-abdominal muscle, partake, to some extent, in these sufferings.

Respiration.—Irregular, sometimes slow, often hurried, sometimes inspiratory act is strongly performed, and again the expiratory, and often it is stertorous. The voice is very often a brief, emphatic and abrupt grunt, sometimes a succession of groans; again, it may be a plaintive moan. There are deep drawn sighs produced by full and free inhalation of air, then very suddenly expelled.

Pulse.—At first rapid and small, then full, hard and irregular; ceases for a time, then becomes regular and full toward the close of the paroxysm.

Excretions.—Sometimes vomiting takes place. Mucous or the undigested food and indigestible materials of the stomach are thrown up, but with difficulty, as the teeth are firmly closed. There are involuntary discharges of urine, of fæces and often of semen in the male; the perspiration is often profuse, and this sometimes shows globules of blood, because of the strongly congested state of the extreme vessels. Sometimes blood is forced from the ears, the eyes and the nose.

Consciousness.—This has been wholly lost, and the sufferer awakes from the paroxysm to a state of semi-consciousness, but entirely unconscious of the severe and violent affliction through which he has passed. Prostrated from the severity of the paroxysm, nature seeks restoration in a profound sleep, from which he may awake only to be plunged again into another convulsive state, as severe, and even more so than the one from which he has just emerged. He passes through another and another, and still another ordeal, as in an instance which came recently under my own immediate observation. Death may occur during a severe paroxysm, from spasm of the glottis, and the consequent accumulation of blood in the cerebral vessels.

The foregoing is a recital of the more severe and extravagant forms of the disease, but the symptoms are not always thus distressing or threatning. There is a milder form of phenomena, as for instance, the patient may be first seized with nausea; this will be succeeded by a sense of faintness, and to this will be added unconsciousness, insensibility, but without convulsive movements. The nausea may be followed by vomiting, which may be beneficial, but yet the nausea may continue with confusion of mind for some hours.

The above is a modified form of the first, and yet there are other symptoms even more mild and less harrassing or depressing than these. The individual may be seized while conversing; he suddenly fails to articulate, or, if still able to utter sounds, they are hesitating, stuttering, confused and disconnected. The eyes now stare, and their expression meaningless, and their stare vacant If the voice is suspended for a short time, it is resumed again at the place in the sentence where interrupted.* During this time the patient suffers from some distressing emotions and hallucinations as if in a troubled dream.

These sub-epileptic forms, or the *vertege epileptique* of the French, are regarded by some as mere *attacks*, rather than those of true epilepsy, but in my opinion without any good reason for establishing such a distinction. It is as much an epileptic seizure as the premonitory symptoms of cholera are indications that the individual is attacked with cholera.

They are but modified cases, and for some reason are less aggravated, yet are epilepsy, and usually take in all the characteristics of the more aggravated, in process of time. In pneumonitis there is first the stage of irritation, which is soon followed by the inflammatory congestive stage, and this again is followed by the more aggravated form or condition of solidification.

One lobe of a lung may be involved only, or those of both lungs, or it may involve one entire lobe, or only the lobules here and there of one or more lobes, and yet notwithstanding these different aspects and conditions, it is nevertheless pneumonitis, when it is detected in either stage or pathological conditions.

Varieties or Species.—Esquirol divides epilepsy into three varieties, viz.: *essential*, *sympathetic* and *symptomatic*. The class which he denominates *essential* is synonymous with the *idiopathic*, of which he makes three varieties, as follows:—From external causes, as from compression, contusion, fracture and insulation.

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* The cases of Esquirol and Ploupart.

He makes four varieties of the sympathetic, as those cases arising from gastric or intestinal irritation; from plethora; from a disordered sympathetic system; from disorders of the genital system; and those which arise from disease of any of the external organs.

Epilepsy is symptomatic of some of the exanthemata, as rubiola, scarlatina, variola, &c.

There is a form which is *simulated* in order to accomplish some design, of acquiring something ardently desired, or to avoid some unpleasant result, or escape the performance of some duty required of them. The Encyclopedia of Practical Medicine gives two species only—the *epilepsia cerebralis* and *epilepsia sympathica*. Of the latter there are five varieties, viz: *epilepsia stomachica*, *hepatica*, *nervosa*, *uterine* and *a dolore*. This division is arranged upon the fact of the organs from which each has derived its name, being the seat or source of irritation.

A better division might be made, into the *primary* and *secondary*, or *central* and *distal*. In the first, it may, and often does take place from external injuries of the head, or those of the calvarium, and in the meninges or substance of the brain. In the second, it occurs from some distal irritation in the organs or structures remote, but involving the brain through sympathetic agencies. The feigned epilepsy is entitled to no rank, as it is a negative condition or term applied to that which does not exist. It is, therefore, no disease at all, and should not be found in the classification, because we have no authority for naming a form of disease which does not exist.

This division and classification has reference to the structures primarily involved, but I see no reason for a further and extended classification of the second species, viz: the *epilepsia symptomatica*, and name each variety from the organ or tissue whence the irritation proceeds. To do so would be to swell the nomenclature unnecessarily, and by multiplying varieties produce confusion. The phenomena are the same whether the irritation proceed from the liver, the stomach, the uterus, the testicles or intestines. The irritation must be transmitted to the centre from either of these structures before the seizure is induced, provided it be of this class.

The *sympathic* variety or class, is contradistinguished from that of the *cerebralis*, in the fact that in the latter the agents or causes which awaken the paroxysm exist within the brain, or in such close proximity as act directly upon it, while in the former the attack is brought about by irritation, transmitted from some distal point or organ. These facts should be borne in mind, as they enter with deep interest and meaning into our diagnosis, prognosis and treatment. If it arise from a lesion of structure within the brain, our skill is required to detect this fact, and when found our prognosis is unfavorable, though our remedial measures will be more intelligently directed. But yet a simple irritation in a distal organ, although more under control, provided the cause be removed, may, by long continuance, produce permanent and incurable lesion of the great nerve-centres. This fact indicates the necessity of early attention because before lesion obtains, the cause being removed, there is a well grounded hope that the effect may cease.

Morbid Anatomy.—The appearances upon dissection are varied. In those who die from the disease, and where dissections have been made there have been revealed within the cranium the evidences of morbid changes, such as we might be taught to expect from the character and persistence of the previous symptoms and history of the cases. Thickening and thinning of the bony structures with osseous tumors. The intra-cranial evidences, in some cases, consists of effusion of serum between the inner table of the skull and the meninges of the brain; these last often thickened and softened, and their vessels dilated and varicose, engorged, containing concretions both fibrous and osseous. There is, in other cases, softening of the brain, or there may be induration. There are tumors, scirrhus in some, fatty or sarcomatous in others. There may be tubercles or hydatids, and cysts, in which last there is a contained serum. The ventricles may contain serum or scirrhus, tuberculous, fibrous, or even osseous tumors, also. In the substance of the brain, as observed, have been found all the above described tumors or abscesses, and a peculiar white substance.

The brothers Wenzel describe a peculiar thinness of the sphenoidal bone, and other changes which destroy the natural relations and form of the osseous portion of the base of the skull. The change in the pineal gland has been found both hard and soft in epilepsy, by Baily, Sœmmering and Greding. The latter has also observed it to be flooded with serum. The pituitary gland attracted the attention of the Wenzels, who found it in a number of cases enlarged; in somes cases containing a thick fluid, and in others a matter which resembled a powder. Rokitansky mentions the presence of a substance like sand. He says he has also seen this in healthy subjects.

[TO BE CONTINUED.]

From the Nashville Journal of Medicine and Surgery.

Contributions to the Medical Flora of Nashville.

By GEORGE S. BLACKIE, M. D., University of Nashville.

"Medical plants are compound medicines prepared by the hand of nature."—PRINC. MED.

An accurate knowledge of the objects around him ought to be acquired by every physician. That an acquaintance with the plants which our Tennessee, and most southern doctors, ride past every day of their lives, may be turned to some practical account, I have endeavored to show in the following pages. Having been of late moving about a good deal in the woods, fields, and river banks, in the vicinity of the city, I have noted all the medical plants I encountered in my rambles, and here present them to the reader without further introduction. He must bear in mind that I include in this list only such as are in a fit state for medical collection at this season (the end of July and commencement of August), and that I have attempted no further arrangement than that of grouping them according to the ordinary system of the pharmacopœias.

ANTHELMINTICS.

By no means infrequent in our darker forests and shady road-side, where the soil is dry and rich, we may observe the deep red and yellow-centred corrollas of the Carolina pink, or pink root (*spigelia marilandica*). Almost every one accustomed to observe the flowers around him, knows this one. It is almost the only Tennessee representative of the great family *loganiaceæ*, an order which is largely represented in the tropical climates, and to which the St Ignatius' bean (*ignatia amara*), and the *strychnos nux vomica*, two of our deadliest poisons, belong. The *spigelia* is named from Spigelius, an eminent botanist of Padua, and is indigenous in all the southern part of North America, from Pennsylvania to Georgia and Louisiana, but on account of the severity of the winter seasons cannot flourish further north. It is a slender, square-stemmed plant, with opposite sessile ovate leaves, terminating in a spike of flowers ranged on one side of the foot-stalk. The calyx is short, in five segments; the corolla long and funnel-shaped, crimson and pink; the stamens are five, with arrow-like anthers; the pistil is superior, having a long style with fringed stigmas. As an anthelmintic, it has been long employed. Gardon, one of our pioneer botanists, probably deserves the credit of having introduced it to the notice of the colonists and the English, he having learned its properties from the Cherokee Indians. The best part to employ is the root, which is given in doses of from ten grains to a drachm, twice or thrice daily. Frequently, however, narcotic symptoms follow its exhibition, such as stupor, headache, dizziness, flushings of the face, and stiffness of the eyelids. When this is observed, it ought to be given in combination with cathartics, which however are not necessary always, for the plant itself acts as a purgative on many persons. It is most valuable in the treatment of *lumbrici*, while for tape-worm it seems to be almost useless. Dr Burnett, who, by the way, advocated its expulsion from the Pharmacopœia, recommended the following formula to those who could obtain the fresh plant:—

Take of dried roots of Spigelia,	℥ ss.
Senna leaves,	ʒ ii.
Dried orange peel,	ʒ ii.
Crushed fennel seed,	ʒ ii.
Boiling water.	℥ xij.

Macerate for two hours in a covered but not air-tight jar, and strain. Dose—a wine-glassful three times a day on an empty stomach. Rhubarb may be made to take the place of senna. The *spigelia* has been found in some parts of this country, to be of undoubted service in what mothers call worm fever.

The peach tree (*amygdalus persica*), too well known to need description, although not largely, has yet been employed with considerable success as an anthelmintic. The decoction of the leaves is bitter, somewhat carminative, diuretic and vermifuge. Large doses also prove sometimes purgative, but it is not safe so to administer it. A tea of the fully formed blossoms is the best method of using this plant, and Lindley thinks that in the blossoms alone is the vermifuge quality resident.

Worm-seed (*chenopodium ambrosioides* var. *anthelminticum*), the *chenopodium anthelminticum* of the Pharmacopœia, which is not uncommon on waste places in the country, is most probably a plant naturalized from Tropical America, but which having once found its way here, has discovered a congenial home and flourishes as well as in the place of its origin. It grows also in many of the northern and western States, and is known also by the names of Jerusalem oak, goosefoot, wormwood, and stinking-weed, the last derived from its abominable smell, its chief characteristic. The root is perennial (probably) and much branched, while the stem is upright and considerably branched, giving the plant a shrubby appearance; the leaves without stalk, alternate and much notched; the flowers, small, green, and though easily recognized in panicles, yet the individuals are in conspicuous. The panicles are slender and destitute of leaves. The seeds are flat, lenticular, shining, and covered by the persistent calyx. The plant is a member of the natural family *atriplicaceæ*, which includes a large proportion of the plants of desolate and waste places. Many of this family contain a strongly smelling, nauseous, essential oil, as, for example, the *chenopodium olidum*, the stinking herb of England. The medical properties of worm seed are resident in such an oil, which is distributed throughout the plant, but more particularly in the leaves and seeds. It commences to blossom in July and continues to flower till September, when it may be collected and dried. The seed should be collected in October. Drying does not remove their peculiar smell. The oil has a strong vermifuge action, and is very likely the best anthelmintic we possess, except Kousso, which is too expensive to be largely employed. The dried seeds are powdered and given in doses of from one to two scruples, thrice a day. An oil is also procured by distillation, which when fresh is of a light yellow color, but becomes brown by age. This oil is given in doses of from four to eight drops night and morning. The seeds are powdered, mixed with syrup, and given as an electuary. The oil is, however, more frequently employed, though its smell and taste render it very hard for children to take it. Mixed with sugar and orange peel it can, however, be swallowed without much difficulty.

ANODYNE.

Verbascum Thapsus, our common mullein, which rears its tall spikes of yellow flowers closely packed together, and spread its large velvety leaves on every road side or waste spot, is notwithstanding its luxuriance, undoubtedly a foreigner, and was introduced into Virginia by some of the early settlers. This luxuriance exhibited by many foreign plants on being introduced into this country is a very striking fact. We find numbers of foreign plants in our country attaining a size and power of reproduction much greater than that which they possess in their native lands. Thus we find the dog fennel, the Jamestown weed, the dock, nettle, and many others, which, coming over with our earliest settlers, seem to have followed their example by destroying the aborigines and taking their places. On the other hand, in Europe we find that many American plants have taken a similar hold on the soil. Thus the banks of the Rhine are in many places yellow with the evening primrose, the Canadian flea-bane is a nuisance to French and Belgian farmers, the *udora canadensis* actually blocks up the canals and smaller rivers of England, having to be annually removed to permit the water traffic to go on uninterrupted, and the locust tree covers whole table lands in Central Germany. The softness of the leaves of the mullein first suggested the idea of using them as a substitute for flannel, for rubbing in rheumatism. Subsequently they were used as an emollient poultice, and were found to be a good discutient for swellings. A decoction of the blossom is better than of

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The wood sorrel (*oxalis stricta*), with its tripartite leaves, and its yellow and pinkish flowers, is well-known to all both by its appearance and taste. It flowers in April and May, and is at present in fruit and fast drying up. Its medical properties are the same as those of the *oxalis acetosella* of Europe, which has long been regarded as an officinal plant there. Its leaves afford one of the most grateful of our vegetable acids. Its juice is often used as a refreshing drink in fevers, and boiled in milk it forms a most delicious whey. Its fresh leaves are invaluable as a salad in cases of scurvy, and even do no small good when placed on scorbutic sores.

ANTI-PERIODIC.

Along the banks of our rivers and creeks grow many varieties and species of willow, (*Salix muhlenbergia*, *S. discolor*, *S. conifera*, *S. rosmarinifolia*, *S. nigra*, etc.,) all of which possess a similar medical property, and though the individual species are, undoubtedly hard to distinguish one from the other, yet the long narrow leaves and slender stems, and in spring time, the long wooly catkins cause the genus to be very readily known. The bark of the willows is generally astringent and bitter, and has been recommended as a substitute for cinchona bark. It contains a peculiar principle, resembling *quinine*, and named *salicine*. This salicine is a bitter neutraline, crystaline substance, obtained from the different barks by means of lime, concentrating what remains to a syrup, throwing down the gummy matter with rectified spirit, evaporating the residue sufficiently for crystals to form, and purifying them in a watery solution, by means of animal charcoal. These crystals, treated with a few drops of commercial sulphuric acid, yield a tint of carmine red. Salicine is given as a tonic in dyspepsia, and as an antiperiodic in doses of from two to ten grains daily. It is not so reliable as quinine, but, however, not so apt to cause congestion of the head. The infusion of willow bark may be given for the same purposes, although now a days its use is almost superseded by that of the active principle. From twenty to forty grains of salicine may be taken daily, or in the intervals between the paroxysms of our intermittents. Magendie says he has seen fevers cut short in one day by three doses of six grains each. Dr. Wood tells us that the decoction of willow has been found beneficial as as an external application in foul and indolent ulcers, and I remember an old man in the north telling me that he always employed it in the skin diseases of children, while the women of his parts found it good for leucorrhœa.

[TO BE CONTINUED.]

Aconite in Rheumatism.

By G. W. Claiborne, M. D., of Petersburg, Virginia.

During my winter practice, it has been my lot to encounter quite a number of rheumatic patients, and hence, I have been induced to place before the profession a remedy which, above all others, I deem most suitable for combatting this disease.

Case I. About the 1st of December, I was called to see a young lady, æt. 20; complexion fair, eyes blue, hair dark; who, from exposure to cold, was suffering with sharp, shooting pains through each joint in her body; right knee and ankle were quite swollen and red, tender; pulse 130; face flushed; skin warm; anorexia; tongue white; rheumatism hereditary.

December 4th, A. M.—℞. Vin. colchici, ℨ i.; aquæ fontis, ℥ vss.; magnesia henri, ℨ j.—M. Dose one half; to be repeated in four hour.

5th, A. M.—Disease not yet abated; knees and ankles both extremely swollen; considerable heat and redness; pulse 120, hard and full; skin dry; secretions torpid; continue the colchicum mixture, and at bed-time give hydrarg. mit. chlo. grs. viij.; pulv. Dover. grs. v. Apply aconite warm, on flannel, to the joints.

6th, A. M.—Medicine has operated; pulse 100, soft; secretions aroused; slept some during the night; parts yet swollen, and painful when moved. Continue the aconite applications, and commence on the following preparation:—

℞. Ammonia phosphatis, ℨ i.; aquæ fontis, ℥ vss.; syrup limonis, ℨ iij; tinct. aconitis fol. gtt. xxx.—M. Dose, two tablespoonsful every four hours.

7th, A. M.—This last preparation has acted finely; ankles and knees much relieved, can move them; complains of pain in each shoulder and wrist, with much tenderness; some pain felt in the hips; pulse 100; skin dry; continue the last solution, with an additional thirty drops of tincture aconitis. The following liniment to be used often on the affected joints:—

℞.—Chloroform, ℥ iss.; tinct. aconitis, ℥ iss.; camphora sps. ℥ j.; tinct. hyoscyami, ℥ j.; ol. olivæ, ℥ i.—M. Ft. liniment.

8th, A. M.—Found that the medicine had operated freely; pulse 90, soft; face not so much flushed as on yesterday; moves herself with more ease, though arms and shoulders somewhat stiff; tongue clean, and not so dry as yesterday. Ordered simply tincture of aconite, in ten drops at each dose, every four hours; parts to be rubbed with the liniment. At bed-time, discontinue the aconite, and give hydrarg. mit. chlo. grs. vi.; pulv. Doveri grs. iv.

9th, A. M.—Is some better, though did not rest so well during the night; pain in one wrist and hand only; calomel has not operated, and hence ordered olei ricini, ℥ ss. Continue the application of the liniment, and give at bedtime four grains of Dover's powder.

10th.—She is up, and looks well; pulse soft and natural; appetite improved; complains of no pain at all; discontinue treatment, and give nourishment.

Case II. Was called to Mr. B——, about the 20th of December; found him suffering with much pain in his back and limbs; face flushed; tongue foul at the base, at the point naked and glazed; has been afflicted off and on for several years with rheumatism, but never before experienced such general pain. Ordered hydrarg. mit. chlo. grs. viij.; pulv. Doveri grs. vi.—M. Ft. in pill No. ij.; one now, and the other at 5 P. M. Called about 6 P. M.; found that the medicines had not operated; fever considerable; pulse hard and full, 120; suffering with much pain. Ordered magnesia and colchicum, to commence about 10 o'clock, P. M., with a teaspoonful of the following, when pain is unbearable:—

℞.—Sulphatis morph. gr. j.; aquæ. menth. pip. ℥j.; sach. alb. ʒi.—M. Sign anodyne.

December 21st, A. M.—He is somewhat easier than on yesterday, though slept but little during the night. Medicine operated freely; pain considerable in each hip; each knee swollen; face flushed; tongue clean, not so much glazed; pulse more soft, 110. Ordered the following liniment:—

℞.—Tinct. aconitis, ℥iss.; chloroform, ℥iss.; tinct. hyosciam. ℥j; spts. camphoræ, ℥j.—M. Sign liniment.

℞.—Ammonia phosphatis, ʒij.; aquæ fontis, ℥vss.; syrup limonis, ℥ss. —M. Dose, magna cochlea quaque four to hora. The liniment to be applied to the parts most affected.

22d, A. M.—Patient no better; passed an unpleasant night; face still flushed; joints swollen, red and stiff; pulse 110; tongue clean; anorexia; medicine operated three times on yesterday. Ordered the following:—

℞.—Tinct. aconitis, gtt. xxxv.; aquæ fontis, ℥ij.—M. Dose, two tablespoonsful every six hours—parts affected to be rubbed with the liniment. Ordered some milk during the day. Called again at 5 P. M. Found him somewhat easier; pulse 100; joints not so tender; appetite returning:

℞.—Ext. aconitis, grs. iv.; ext. hyosciam. grs. ij.; sulph. quiniæ, grs. vj. M. Ft. in pill, No. ij.; one at 7 P. M., and the other in five or six hours; if no sleep, continue the application of liniment to the affected joints.

23d.—Patient better; slept quite well during the night; pulse soft and about 90; tougue clean, moist; appetite fair, returning; the joints of his legs are yet somewhat swollen, and painful when moved; no redness however. Ordered the following:—

℞.—Tinct. aconitis, gtt. xv.; syrup limonis, ℥ss.—Dose, teaspoonful ter die. Continue the liniment to the joints.

24th, A. M.—Patient up and doing well; appetite good; urine indicating some excess of uric acid—for which ordered sodæ bicarb. grs. x, in a wineglass of water, three times a day; Dover's powders, grs. v., at bed-time, and dismissed.

From these cases, together with others which have fallen into my hands, I believe it clearly apparent that the aconite treatment, together with a little mercury, where foul tongue and offensive breath indicate disordered secretions of the primæ viæ, is that which promises the most speedy cure. This treatment, together with some one of the alkalics, where the urine indicates an excess of uric acid, is that which I have generally adopted. After dismissing my patients, I usually order, for a day or two, a few grains of iodide potassium with syrup of gentian.—*Maryland and Virginia Med. Jour.*

◆

Action of Different Medicines on the Mental Faculties.

By Professor Otto.

All stimulant and exciting medicines increase the quantity of blood that is sent to the brain. If this quantity exceeds a certain amount, then most of the faculties of the mind become over-excited. Nevertheless, the degree of this action is observed to vary a good deal in different cerebral organizations; and it is also found that certain stimulants exercise a peculiar and characteristic influence upon special or individual faculties. Thus ammonia and its preparations, as well as musk, castor, wine, and ether, unquestionably enliven the imaginative powers, and thus serve to render the mind more fertile and creative. The empyreumatic oils are apt to induce a tendency to melancholy and mental hallucinations. Phosphorus acts on the instinct of propagation, and increases sexual desire; hence it has often been recommended in cases of impotence. Iodine seems to have a somewhat analogous influence; but then it often diminishes, at the same time, the energy of the intellectual powers. Cantharides, it is well known, are a direct stimulant of the sexual organs; while camphor tends to moderate and lull the irritability of these parts,

Of the metals, arsenic has a tendency to induce lowness and depression of the spirits; while the preparations of gold serve to elevate and excite them. Mercury is exceeding apt to bring on a morbid sensibility, and an inaptitude for all active occupation.

Of narcotics, opium is found to augment the erotic propensities, as well as the general powers of the intellect, but more especially the imagination. Those who take it in excess are, it is well-known, liable to priapism. In smaller doses it enlivens the ideas and induces various hallucinations, so that it may be truly said that, during the stupor which it induces, the mind continues to be awake while the body is asleep. In some persons opium excites inordinate loquacity. Dr. Gregory says that this effect is produced more especially after the use of the muriate of morphia. He noticed this effect in numerous patients, and then tried the experiment on himself with a similar result.

He felt, he tells us, while under the operation, an invincible desire to speak, and possessed, moreover, an unusual fluency of language. Hence he recommends its use to those who may be called upon to address any public assembly, and who have not sufficient confidence in their own unassisted powers.

Other narcotics are observed to act very differently on the brain and its faculties from opium. Belladonna usually impairs the intellectual energies; hyoscyamus renders the person violent, impetuous and ill-mannered. Conium dulls and deadens the intellect, and digitalis is decidedly anti-aphrodisiac. Hemp will often induce an inextinguishable gaiety of spirits; it enters into the composition of the intoxicating drink which the Indians call *bauss.* The use of the *amanita muscaria* is said to have inspired the Scandinavian warriors with a wild and ferocious courage. Tobacco acts in a very similar manner with opium, even in those persons who are accustomed to its use; almost all smokers assert that it stimulates the powers of the imagination.

If the psychological action of medicines were better known, medical men might be able to vary their exhibition, according to the characters and mental peculiarities of their patients. The treatment of different kinds of monomaniacal derangement also might be much improved; and it is not improbable but that even a favorable change might be wrought on certain vicious and perverse dispositions, which unfortunately resist all attempts at reformation, whether in the way of admonition, reproof, or even of correction.—*Zeitschrift für die Gesammte Medicin, and Medico-Chirurgical Review.*

Selections.

CHLOROFORM AS A HYPNOTIC.—Opium and lactucarium are almost the only two agents which induce sleep by a special sedative action; and they both have their inconvenience as well as their highly valuable properties. A hypnotic without these inconveniences would prove an agent of great value, and M. Fonssagrives, of Cherbourg, believes that chloroform is that agent, judging from his having used it with constant success since 1854, when it was recommended by Dr. Uytterhaven, a Belgian practitioner. Sleeplessness arises from different causes; sometimes it is the result of the persistence of a painful symptom which forciby excludes repose; at others it constitutes an entirely nervous symptom originating in some moral suffering, absorbing preoccupation, or too active intellectual exertion; while at other times it proceeds from a vicious habit of the cerebral centre. The sleeplessness becoming a cause of sleeplessness; or, finally, the sleeplessness may result from the abuse of hypnotic remedies, or may be an epiphenomenon of certain acute diseases. It is in these latter cases that chloroform is of especial service. The dose is small but effectual, namely, from five to ten drops.—*Bulletin de Therap.*

Iodohydrate of Ammonia in Constitutional Syphilis.—Prof. Gamberini deduces the following conclusions from fourteen cases:—1. Iodide of ammonia and the iodohydrate of ammonia are indicated in the same cases of syphilitic diseases as the iodide of potas. 2. The treatment from the employment of this remedy in increasing doses from 10 to 80 centigrammes daily, in from 100 to 180 grammes of some liquid, has lasted from 14 to 35 days, averaging 21 days. 3. A sensation of burning or heat in the throat and stomach of some patients forced us to suspend temporarily the iodide, as well as to lessen the dose. 4. A liniment, composed of the same remedy, with olive oil, 15 centigrammes of the former, and 30 centigrammes of the latter, has assisted in curing the osteocopic pains. 5. Syphilitic accidents cured by iodide of ammonia have been cases of arthralgia, rheumatic neuralgia, periostosis, ganglionic enlargements of the groins and neck, and a papulo-vesicular eruption of the back. The process of making this medicine is very simple. It is that of Ruspini, consisting in precipitating a solution of the iodide of iron by carbonate of ammonia, filtering the solution, which is then to be evaporated promptly, until a pellicle is formed, and then crystallize. This salt crytallizes in cubes, and is very soluble in water. Its taste is not very disagreeable, being a little more bitter than iodide of potas.—*Bolletino delle Scienza Medica: L' Union Medicale de la Gironde.*

Ventilation of Rooms at Night.—An extraorninary fallacy is the dread of night air. What air can we breathe at night but night air? The choice is between pure night air from without and foul night air from within. Most people prefer the latter. An unaccountable choice. What will they say if it is proved to be true, that fully one-half of all the disease we suffer from, is occasioned by people sleeping with their windows shut? An open window most nights in the year can never hurt any one. In great cities night air is often the best and purest air to be had in the twenty-four hours. I could better understand in town shutting the windows during the day than during the night, for the sake of the sick. The absence of smoke, the quiet, all tend to making night the best time for airing patients. One of our highest medical authorities on consumption and climate has told me that the air of London is never so good as after ten o'clock at night.—*Florence Nightingale.*

Chloride of Zinc Moulded into Sticks for the Purpose of Cauterization.—Soften gutta-percha in boiling alcohol, and incorporate it with finely pulverized chloride of lime in a warm porcelain mortar, taking equal parts of each. Then roll rapidly on a porphyry slab, to the diameter of a quill, and divide in fragments, each of which shall be pointed at one end. Keep these in a wide-mouthed bottle in powdered lime. These sticks remain perfectly hard, are easily handled, cauterize with great regularity, and act as a sponge through which the chloride will slowly exude, becoming liquid by the action of the air and the skin.—*Lancet.*

The Obstetrical Clinic at the Pennsylvania Medical College, opened on Saturday morning, Sept. 1st.

Iodide of Propylamine.—According to M. Benjamin J. Crew, in the *American Journal of Pharmacy*, for September, propylamine combines readily with the aid of a gentle heat with iodine, and forms a colorless solution in which the characteristic odor of these two substances can be perceived. It may be prepared by adding iodine to a convenient quantity of propylamine in a glass flask over a sand bath as long as the iodine is taken up; a deep red solution is first formed, which, as the combination is effected, becomes gradually colorless; in case of an excess of iodine, a small addition of propylamine will speedily take it up. M. Crew suggests that the iodide of propylamine might be found to answer better in certain cases than the chloride. He proposes the following formula:—℞. Iodide of propylamine, 25 drops; peppermint water, 6 f. oz.; sugar 2 drams. Dose—A table-spoonful every two hours. In this form the patient would receive the $\frac{1}{16}$ grain of iodine at a dose.

Piperin in Intermittent Fever.—Dr. Meli, of Venice, as the results of numerous experiments, comes to the following conclusions:—1. The febrifuge power of piperin is both energetic and rapid. 2. Its activity is much greater than that of cinchona. 3. It is more convenient than cinchona, and its succedanea, exhibiting a great activity in a very small compass. 4. It neither changes, retards, or suppresses any secretion, or excretion. The alvine dejections are regularized, and the urinary secretion is rendered active.—*Med. Times and Gaz.*

Chloroform in Scabies—Professor Bock, in *Schmidt's Jahrsbuch* for August, states that the external application of chloroform is useful in some cases of itch. This substance appears to kill the insect, and moreover, by producing anæsthesia, it relieves the irritability of the skin. M. Bock has never observed any inconvenience to arise from the use of chloroform; and the sensation of burning, which it produces for a short time, is quite trifling in comparison with the intolerable itching caused by the disease.—*Chemist and Druggist.*

Lotion for Mentagra.—M. Richard has recently called attention to the good effects which he has seen from the application, in patients affected with mentagra, of a lotion composed of sulphate of zinc and sulphate of copper in distilled water. After the employment of ordinary remedies, and when the affected part is cleansed from the crusts which cover it, the lotion is applied frequently; and under this treatment it has been found that the disease disappears in a comparatively short period.—*Br. Am. Jour.*

Tannin as an Antidote to Strychnia.—Dr. Kurzak, in the *Zeitschrift der Gesellschaft der Aerzte zu Wien*, has published a paper in which he claims tannin to be a most excellent antidote in strychnia poisoning. The tannate of strychnia formed, is insoluble in the intestinal juices. For 1 part of strychnia, 20 to 25 parts of tannin should be given, or even more, because a considerable part of the tannin is precipitated by the contents of the stomach—gelatine, for example. When tannic acid cannot be obtained, strong infusions of powdered gall-nuts, or green tea, should be used.

Efficacy of Ether in cases of Deafness.—Dr. Lafargue has communicated to the *Bulletin de Therapeutique* the following important case of a young deaf and dumb boy cured by ether, according to Mdlle. Cleret's method:—"Young Wailloz, of Libourne, is eight years of age; he is free from any scrofulous affection, which by many is considered the chief cause of surdo-mutism; and on the contrary, has a very strong constitution, and as lively and active as his age requires. He was born deaf and dumb, and this affection cannot be attributed to any hereditary cause, since all the members of his family enjoy the most perfect health. His father, had, a short time ago, taken him to Bordeaux, to be examined by the members of the Academy, who all pronounced him to be incurable. His treatment by ether began on the 27th of April last, when eight drops of rectified sulphuric ether was instilled into each ear. At first, the ether caused pain in the right ear, to avoid which the dose for that ear was reduced to four drops; but in the sequel this diminution was discontinued as unnecessary. The relief was almost instantaneous; on the second or third day, young Wailloz began to articulate the words 'papa, mama, tante, boire,' but, singularly enough, always in a whisper. Dr. Lafargue believes this to be caused by want of habit, and likely to wear off by the gradual development of his vocal powers. The patient hears the appeal of an alarm, the striking of a clock, and the sound of a bird-call imitating the note of a quail. These unusual noises amuse him very much. He can hear better with the right than with the left ear; and as it was the former which was painful when ether was first applied, Dr. Lafargue suspects that the curative activity of the remedy is in proportion to the physiological effect it produces; a proposition only to be satisfactorily answered by future experiment. The patient is already sufficiently recovered to receive *viva voce* instruction, but the treatment is still continued."—*Chemist and Druggist.*

Subnitrate of Bismuth in the treatment of Burns and Scalds.—Dr. Richardson, in the *American Medical Times*, says:—"I was induced to use bismuth in the treatment of burns from its well-known effect in calming irritation, and even actual inflammation of mucous membranes. The following is the method of employing it: rub the bismuth in a mortar, with a sufficient amount of glycerine to form a paste of thick paint, which should be applied to the affected surface by means of a camel's hair pencil, or a mop made of soft linen; the parts should be first thoroughly dried and each blister opened with a needle; after a thick coat has been applied, the parts should be protected from the bed clothes by a layer of clean carded cotton. In burns of the first degree, one application will often suffice, but in those of the second it may be necessary to repeat it, in part at least, from day to day, in consequence of its disturbance and the wetting of the cotton by the discharges. This method of treating burns has proved superior to every other in the Charity Hospital."

Quinine in Croup.—W. H. Baker, M. D., of Texas, Ky., says:—"On the 15th of April last, about 11 o'clock at night I was called to visit a child suffering with croup. It was six miles to the residence of its parents. and I was told by the messenger that it was feared the child would die before I could reach it. He was still alive, however, upon our arrival, although apparently sinking very fast. Gave it ipecac, tartar emetic and hive syrup, but without producing emesis. I then placed the little patient in a tub of hot water, with the hope that it might produce relief, but to no purpose. The throat was then irritated with a feather, and cauterized with nitrate of silver, but still vomiting could not be induced. It was apparent to me that the child must die unless something was soon done for its relief, and having read in the *Journal* of the great efficacy of quinine in croup, I determined as a last resort to try it. I therefore administered a solution--one grain of quinine to a tablespoonful of water—a tablespoonful of which is swallowed with great difficulty. Its mother begged me to give it no more, as its suffering was so great. Its extremities were at this time quite cold. I however kept giving it the quinine, a tablespoonful every hour. A piece of flannel with turpentine was applied around its neck. After the third dose of the solution the patient broke out in a perspiration. This treatment was kept up for twenty-four hours, when it was administered every two hours for twenty-four hours longer, and then discontinued. The patient, who was about four years old, soon fully recovered.—*Nashville Jour. of Med. and Surg.*

Pharmacy.

OINTMENT FOR PILES.

Ointment of Belladonna,	60	grammes.
Powdered Camphor,	4	"
Tincture of camphorated opium,	4	"

Apply this for piles to the parts, and upon the canal of the urethra in blennorrhagia.—*Jour. de Chimie Medicale.*

OPIAT FOR BLENNORRHAGIA.

Cubebs,	60	grammes.
Copaiba,	20	"
Catechu in powder,	5	"
Conserve of roses,	25	"

Take of this mixture, twice a day, a piece as large as a walnut.—*Jour. de Chimique and Medicine Practique.*

FERRURET COD LIVER OIL.

Brown cod liver oil,	250	grammes.
Distilled water,	250	"
Carbonate of soda,	14	"
Proto-sulphate of iron,	15	"

Mix in a large bottle; shake from time to time for eight days; filter through filtering paper; separate the water and filter the oils the second time; the oil oxydizes and combines with the iron. It contains one per cent. of iron; every gramme containing one centigramme of iron.—*Jour. de Bordeaux.*

MIXTURE IN PNEUMONIA.

By Dr. Hiard.

Distilled water of peppermint,	30 grammes.
" orange flowers,	30 "
Syrup of orgeat,	60 "
Camphor,	30 centigrammes.
Tincture of digitalis,	15 drops.
" castoreum,	25 "

A spoonful three times a day.

WASH FOR LUPUS.

Distilled water,	250 grammes.
Bichloride of mercury,	40 centigrammes.
Hydrochoric acid,	16 drops.

Apply three times a day.—*Bull. de Therap.*

HYPOPHOSPHITE OF QUINIA.

By J. Lawrence Smith, M. D.. Prof. of Chemistry, University of Louisville.

I brought this article to public notice a short time ago, through the pages of this Journal. As I was not then prepared to give a statement of its composition, that omission will now be made up.

In one hundred parts there is—

Quinine,	83.00
Hypophosphorous acid,	10.09
Water of combination,	2.30
Water of crystallization,	4.60

Giving the formula:—$C^{40}H^{24}N^{2}O^{4},PO,HO+2$ aq.; or, according to Gerhardt's method of statement, just double that formula. Its physical characters have been fully described.

The manner in which it is manufactured at the Louisville Chemical Works, is as follows:—50 ounces of sulphate of quinine is placed in a large porcelain capsule; to this is added 2 gallons of distilled water, and 2 ounces of hypophosphorous acid. Warm up to about 200°F., and make a perfect magma of the sulphate of quinine and water, then add a solution of hypophosphite of baryta, until a perfect decomposition is produced. Great care must be taken to have no excess of baryta salt; better have a slight excess of sulphate of quinine. But a little skill will enable a competent operator to obtain an exact neutralization. While warm, the solution of hypophosphite of quinine is filtered off from the sulphate of baryta and allowed to crystallize. The sulphate of baryta is then washed, and the washings added to the mother water of the first crystallization, and evaporated with great care, when other crystals may be obtained. If not carefully evaporated, it will become colored. The crystals are drained and dried on a cloth stretcher.—*Am. Jour. Pharm.*

TARTRO-CITRIC LEMONADE.

(*Liquor Sodæ Tartras.*)

By Prof. J. Lawrence Smith.

There is nothing new in the use of tartrate of soda as a purgative, and it is only surprising, that once known, it ever gave place to the citrate of magnesia to which there are several objections well-known to practioners. Among these I would enumerate the not unfrequent irregularity of its operation, sometimes not acting as promptly as desired, at other times with too great and continued energy, requiring anodynes to arrest its operation. Again, owing to the manner in which it is made, and the want of uniformity in the composition of the commercial carbonate and calcined magnesia, the amount of free acid in the solution varies much, when made at different times by different operators, and with different lots of materials. There being sometimes two or three drams of free acid present in a bottle, and besides, under all circumstances, the mixture must be quite acid in order to retain for any length of time the citrate of magnesia in solution. Mitscherlich and Bence Jones have both made experiments on citric acid, and they consider it a poison analogous to oxalic acid.

Yet another objection to citrate of magnesia is the certainty of its undergoing decomposition, resulting in the deposition of an insoluble citrate of magnesia, a change that takes place very rapidly when the bottle is opened.

With these facts before me, I compounded a preparation of tartrate of soda with lemon syrup and water, (at first I introduced a small portion of citric acid, calling the mixture tartro-citric lemonade.)

It is free from the objections of the citrate of magnesia—is a prompt and certain purgative, without excessive action, and uniform in composition, does not undergo decomposition even after the bottle is opened, even more agreeable to the taste and less costly than citrate of magnesia. It was first manufactured by T. E. Jenkins & Co., and is now also manufactured to a large extent at the Louisville Chemical Works.

The formula adopted by Messrs. T. E. Jenkins & Co., at the Louisville Chemical Works, which is under my direction, is—

Sal soda,	21 lbs. 14. oz.	avoirdupois.
Tartaric acid,	15 lbs.	"
Sugar, (white)	24 lbs.	"
Water, to make	25 gals.	"

It is then put into strong twelve ounce bottles, and thirty-five grains of bicarbonate of soda added to each bottle, and immediatly corked and fastened by twine or wire.

This preparation has been used in Louisville for about six years, and is gradually extending over various parts of the west and south. Wherever it has once got into use, it has never been abandoned, and the names of hundreds of physicians could be obtained, certifying to its utility and preference over the citrate of magnesia. I think that it would be well for our pharmacopœia to adopt it.—*Am. Jour. Pharm.*

RED PRECIPITATE OINTMENT.

By F. A. Keffer.

TO THE EDITOR OF THE AMERICAN JOURNAL OF PHARMACY,

Sir:—Being aware of the great difficulty in keeping, especially in warm weather, the Ung. hydrargyri oxidi rubri, I have been led to make some experiments with the same, and find that, instead of using lard, if I use oleum ricini, that the preparation will keep perfectly well for a great length of time. I have now in my possession a sample that has been made over two years, and it is perfectly free from rancidity, and still retains its original color, the mercury to all appearance not having become deoxydized in the least. My formula is

℞. Olei ricini,............................ ℥ iiiss.
Ceræ albæ,......................... ℥ ss.
Hydr. oxidi rubri,.................. ℥ ss.

Melt the wax and oil with a gentle heat, and when cool, rub in the red precipitate previously reduced to fine powder.

Hoping the publication of this will be of some advantage to pharmaceutists,

I remain, yours, &c.,

Phila., *July*, 1860. FRED. A. KEFFER.

Editorial.

AMERICAN PHARMACEUTICAL ASSOCIATION—NINTH ANNUAL CONVENTION.—Pursuant to adjournment last year, the association convened in New York on Tuesday, September 12th, in the Hall of the University, on Washington Square. The attendance of apothecaries and druggists from all parts of the country was large. We are able to give only a synopsis of its transactions this issue, for which we are indebted to the reports of the daily press, but shall give next month a full report, together with some of the more interesting papers.

The president, Mr. Samuel M. Colcord, of Boston, called the meeting to order, and appointed a committee to receive credentials of the delegates from the different Colleges of Pharmacy. The committee reported that delegates were in attendance from the Massachusetts, New York, Philadelphia, Maryland and Cincinnati Colleges of Pharmacy. Mr. Chas. T. Carney, Boston, from the executive committee, reported a large number of names for membership, who were elected. Another list was handed in and laid over till to-day.

The reports of various committees were read by their titles, and laid on the table to be called up at the pleasure of the association.

Mr. Carney read the report of the executive committee, congratulating the association upon its prosperity—referring to the inroads of death in the society's ranks, and wishing future prosperity to the association. The report was received and adopted.

The report of the committee on home adulterations was called for. The report states that the public are utterly unaware of the amount of adulteration in common articles of use and food; and one can scarcely believe it when the facts are presented. The committee recommend that lead pipe should never be used to convey water for drinking purposes, and cited several cases of lead poisoning in consequence. An analysis of a large number of specimens of milk during the past year, showed, with but one exception, great adulterations, not only of water, but of salt, impure milk, and coloring matter. Many of the yeast powders and baking compounds are very unwholesome, and persons cannot be too careful about purchasing such things. The committee state there is great adulteration in liquors, but they think there is a greater error among the people in regard to the use of strychnine in whisky; as in the analysis of many specimens, they found none. In the matter of drugs, opium has been found highly charged with shot. Chloroform has been found much adulterated with alcohol. The report was accepted and adopted. On the motion of Mr. Meakim, of New York, a business committee was appointed to take charge of any recommendations and unfinished business.

The president then delivered a short valedictory address, after which the association adjourned to meet this morning at nine o'clock.

At the meeting on the morning of the second day, forty-two new names were reported for membership, and the executive committeee stated that other names had been received, but unaccompanied by vouchers, while some had been objected to by members of the association. At the suggestion of Dr. Squibb, these were held over by the committee to obtain further information respecting them.

The following officers were elected for the ensuing year:—

President—H. T. Kierstead, of New York. *Vice Presidents*—1st. W. J. M. Gordon, Cincinnati; 2d. William S. Thompson, Baltimore; 3d. Theodore Metcalf, Boston. *Recording Secretary*—J. T. Shinn, Philadelphia. *Corresponding Secretary*—P. U. Bedford, New York. *Treasurer*—Henry Haviland, New York. *Executive Committee*—William Procter, Jr., Philadelphia; Charles A. Tufts, Dover, N. H.; James Balmer, Baltimore; George W. Weyman, Pittsburg; James T. Shinn, Philadelphia. *Committee on the progress of Pharmacy*—John M. Maisch, Philadelphia; Edward S. Wayne, Cincinnati; Charles T. Carney, Boston; John Meakin, New York; P. U. Bedford, N. Y.

The president elect not being present, the first vice-president, W. J. M. Gordon then took the chair.

A paper was read by Chas. T. Carney on the substitution of paraffin for wax in serate. He had not had an opportunity of testing by experiment whether any therapeutic objections existed to its use, but had found that it was available as a substitute for wax, and also spermacetti in the preparation of serates, although the temperature at which parffin solidifies after being melted, and its consequent tendency to granulate, rendered it sometimes objectionable, when both wax and spermacetti were employed. A small quantity of white wax should be used in all cases.

Frekerick Stearns, of Michigan, submitted a paper on alcohol, stating that the Ohio River Valley contributed the largest share of whisky and its derivatives produced in the United States. The amount of whisky which finds a market annually in Cincinnati, is about 500,000 barrels, worth on an average, one year with another, $5.000.000. An estimate of the total product of whisky in the United States, based upon its production in the several States, and not upon the receipts of the large eastern markets, gives 1.500.000 barrels. The total product of alcohol in the United States is 184.000 barrels, worth over $7.000.000. Of this quantity one-fourth is manufactured in Cincinnati. The manufacture in that city, has however, fallen off at least one-half since 1858, when it reached its maximum, owing to the foreign demand, which has been nothing since. It is estimated that, until the introduction of illuminating coal oils, by far the largest proportion of the common alcohol produced was employed in the manufacture of burning fluid; since, however, the largest proportion is employed under the name of pure and proof spirit in the manufacture of domestic brandy, gin, &c.

In the remarks that followed upon this paper, a statement was made, which was corroborated by several members, that in making Catawba brandy, instead of its being distilled from Catawba wine, as is generally supposed, the mare, consisting of seed, skins and pulp, is placed in a still with ordinary whisky and distilled, and constitutes the Catawba brandy of commerce. Catawba wine is $1 50 per gallon, and to produce the brandy from it would cost from $6 to $8, while it is offered at from $2.50 to $4.00 per gallon.

Papers were read on the preparation of emplastum assafœtida, by William Procter, Jr.; upon New England carrageen, by Augustus P. Melzar, of Boston; upon the question can the seed of conium maculatum be collected in sufficient quantity for the preparation of conia as an article of commerce, by Henry F. Fish, Waterbury, Conn., in which he affirmed that it could be; on the production of atropia from American ground belladonna root, by William Procter, Jr., of Philadelphia. affirming that belladonna root would yield one-third of one per cent. of atropia.

After taking a recess of three hours, the convention met again at three and a half o'clock in the afteonoon.

J. D. Dix exhibited a specimen of genuine Spanish saffron, together with three of the adulterated article. The pure is worth $12 a pound, and the others from $3 to $4. From one of the inferior samples the strength had nearly all been extracted; the second contained from 25 to 30 per cent. of marigold flowers, which had been dyed with saffron; the third was composed entirely of dyed marigold. The genuine is distinguished by the stamens being fringed at their extremities, and from their tendency to unite in groups at the base.

A long discussion was had on various amendments to the constitution of the association, which resulted in laying the whole subject on the table. Several papers were then read, one by Edward Parrish, on the preparation of aloin; another by William Precter, on guaiac, which he considered a balsam. Dr. E. R. Squibb, in a paper on etherial oils, affirmed that when diluted with two parts of ether they kept perfectly well.

TREATMENT OF ABORTION, BY EDWARD HALE, M. D., JONESVILLE, MICH.—We have received the above entitled monograph, presenting the causes and consequences, with suggestions and indications for the use of "new remedies" in its treatment.

Dr. Hull is connected, we believe, with the homœpathic school of practice, and has given much attention to investigating the properties of indigenous remedies, and their introduction into that system of practice. He advocates, in the pamphlet before us, the use of a large number in treatment of abortion. That portion devoted to the causes and consequences of this depraved and abominable habit, should be read by every intelligent person, and every effort at its suppression should receive the support of all classes, regardless of the source from whence it may arise.

Those articles to which he specially refers as used with satisfaction, are aletrin, asclepin, baptisin, caulophillin, gelseminum, helonin, hydrastin, macrotin, podophyllin, sanguinaria, senecin, trillin, and viburnin. These articles have been used by the medical profession generally, for some time; a new field of employment and usefulness is now opened to them, and in giving such results as may be communicated to us in a future number, it will be for the benefit of those interested in the investigation of all new remedies, without expecting they will meet with the sanction of all, or that we shall be responsible for them, or committed to any system of practice.

MYRZINA AFRICANA—A NEW REMEDY FOR TÆNIA.—At the last stated meeting of the New York Academy of Medicine, I presented a specimen of the *Myrzina African*, from Absynnia, where it is extensively used for the expulsion of tænia lata. I know nothing of the description of the plant; the pulverized seed is the part used, in doses of one-third to one dram, administered in the morning, an hour or two before the usual time for evacuation of the bowels. On the previous evening, beef tea thickened with flour is given, and in one hour after, a full dose of castor oil. The seed must be powdered, and mixed with water. The Academy ordered its reference to the section on mataria medica, in order that its properties might be tested.

JOHN G. ADAMS, M. D.

Bridgeport, Sept. 25*th*, 1860.

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Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER XI.

ILLICIUM FLORIDANUM.

(Starry Anise.) Natural Order, *Magnoliaceæ;* Linnean System, *Polyandria Monogynia.*

Besides the magnolia and the liriodendron, the order magnoliaceæ includes another genus, illicium, well deserving our attention as a medicinal plant, and ranking among our most palatable indigenous stimulant tonics. Robert Brown and Lindley have included it under the order winteraceæ, regarding the presence of pellucid dots in the leaves as a characteristic mark of distinction between these two orders. These dots, however, exist in all our native magnolias, as well as the exotic species, and may be observed with a lens of very moderate power, if not in the leaves when too coriaceous, at least in the petals. The leaves or petals of all our species of anonaceæ are likewise dotted in a similar manner, and it is worthy of note, that they all possess analogous aromatic and stimulant properties.* The genus illicium consists of fine, spicy, flowering shrubs, abounding along the coast which bounds the Gulf of Mexico, extending through Florida and Georgia to the Carolinas. The species I. floridanum, so named from its first discovery in Florida, is an evergreen shrub or small tree, with leaves scattered or growing in tufts on short petioles, oval, lanceolate, slightly acuminate, entire, smooth on both sides, and firm or fleshy. The flowers grow on slender, nodding peduncles, an inch or two in length, when fully expanded the size of a dollar, and of a dark purplish crimson. The leaves and young shoots abound in a fine, clear mucilage, which imparts to water a ropy consistence. This mucilage is separated from the decoction by alcohol in the form of dark brown, stringy coagula. The muriate of tin causes a precipitate after these coagula are withdrawn, which would seem to indicate the presence of extract. Sulphate of iron, added to the decoction coagulates the mucus and darkens the color. There are no traces of resin, although the strong aromatic properties indicate the presence of volatile oil. A strong tincture is not disturbed by the addition of water. The bark and leaves are strongly impregnated with a spicy, aromatic taste and smell, resembling some of the pungent seeds, as coriander, anise, &c. This aroma is preserved in the distilled water and fills the room with its fragrance, while distillation is going on. No accurate analysis of this plant has as yet been made. Its active constituents are undoubtedly a peculiar bitter principle, neutral or alkaloid, and a volatile oil, with a small amount of tannic acid.

In regard to its medicinal properties, they are stated, on good authority, to be analogous to those of canella and cascarilla. Some have compared it to sassafras, others to anise; but it differs from these in possessing more tonic virtue. It may be called a mild, aromatic tonic, very acceptable to the stomach, and well adapted to debilitated states of the digestive organs, as atonic dyspepsia, flatulence, diarrhea and dysentery, connected with weakness or relaxation of the bowels, or in the convalescence from these affections. It would also prove a good addition to other tonics.

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* The rind of the fruit of the uvaria triloba, (papaw, custard apple) posses a very active acid; while the juice of the unripe fruit and the powder of the seeds, are a powerful and efficient vermifuge. The pulp of the fruit is also extensively employed as a topical application to sores and ulcers.

The illicium may be used in the form of powder, infusion, tincture or fluid extract. The modes of preparation and doses the same as those of the asarum canadense.

The *I. parviflorum*, first discovered by Michaux, in Georgia, so closely resemble the sassafras in taste, as scarcely to be distinguished from it. Both of these species deserve further investigation.

COLLINSONIA CANADENSIS.

Natural Order, *Lamiaceæ*, or *Labiatæ*, Lindley; Linnean System, *Diandria Monogynia.* (*Rich Weed—Heal All—Ox Balm—Horse Balm—Knot Root—Stone Root—Hardhack—Rich Leaf—Horseweed—Broadleaf Collinsonia*, &c.)

The order labiatæ embraces numerous genera and species of herbaceous or suffruticose plants, having quadrangular stems, and opposite branches and leaves, which are studded with vesicles containing an essential oil highly aromatic. These plants abound in temperate climates, and in no instance possess poisonous properties. Most of them are fragrant, and agreeable to the taste, and endowed with decidedly stimulant properties; hence used as stimulants, cordials, carminatives, sudorifics, &c. Some have astringent and tonic properties, while others are used as kitchen herbs for flavoring sauces. The sage, rosemary, lavender, thyme, mint, &c., are familiar representations of this universally recognized order. Their well-known cordial, aromatic and stomachic qualities depend upon a volatile oil, contained in glandular receptacles which abound in the leaves and other herbaceous parts, with which a bitter principle is variously mixed, in some cases, connected with a small proportion of tannin. These latter impart to them a degree of tonic power.*

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* Although the order labiatæ contains more plants yielding uncombined oil than any other order, yet several of the others secrete them in considerable quantity. Thus the natural order *myrtaceæ* yields the cajuput oil, the oil of cloves, (*caryophyllus aromaticus*) and of allspice, (*eugenia pimenta;* the *aurantiaceæ* yield the oils of lemon, orange and bergamot; the *rutaceæ* present us the oil of rue; the *umbelliferæ* furnish the volatile oils of caraway, anise,

The collinsonia canadensis, the only species of the genus found in the northern and eastern States, is a herbaceous plant, with large, broad, cordate, ovate, smooth, opposite leaves; the flowers in terminal panicles of a yellowish violet color. It is found widely disseminnted in the United States, though not so abundant at the south; flowering from July to September. The whole plant has a peculiar balsamic smell, which is milder and pleasanter in the flowers than in the root, this having somewhat a rank, disagreeable odor. It has a warm and pungent taste, and yields on distillation an essential oil. The plant grows to the height of two feet, with a perennial, knotty root. The flowers are diandrous, sometimes tetrandrous and monogynous; with a labiate calyx and corolla, the latter of which has the lower lip fringed. No accurate analysis of this plant has yet been made; its most important constituent, however, is known to be a volatile oil. It also contains resin, tannin, gallic acid, starch, gum, sugar, and a peculiar bitter neutral principle, *collinsonin.*

The medicinal virtues of this plant have been pretty extensively tested in domestic, if not the regular practice, and is regarded as tonic, astringent, diaphoretic and diuretic. With some practitioners it ranks very high as an alterative, especially in chronic affections of the genito-urinary organs, as cystitis, or catarrh of the bladder, gravel, leucorrhea, &c. Its wide application in the treatment of diseases, many apparently of a dissimilar kind, has given it the popular name of heal-all. By the Indians it is regarded as a specific for all snake bites, wounds and bruises, while by the common people it is no less esteemed as a remedy for headache, colic and indigestion, while many cases of dropsy have been reported to have been cured by an infusion of the fresh plant, or the root in cider. In New England, especially, this

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dill, fennel,&c. We have already seen that volatile oils are extensively found throughout the vegetable kingdom, in combination with resin, called oleo-resin, and these with a peculiar bitter principle, neutral or alkaloid, constitute the active medicinal agents of many roots, woods, barks, leaves, flower and fruit. Though the oleo-resins all operate as powerful excitants, topically upon parts to which they are applied; and and also upon particular organs, and the system generally after they are absorbed, yet associated as they often are with a peculiar bitter principle, as in the Virginia snake-root, they exert a decidedly tonic influence.

plant has a high reputation in chronic diseases of the urinary organs, and ascites, though it has been found to irritate the stomach in the form usually administered, viz., the powdered root, which is given in teaspoonful doses. Its influence over the secernent and absorbent systems is strongly marked, hence its demonstrated efficacy as a general alterative, and adapted to all cases where such indication is present. By those who have employed it in such cases, it is believed to be an efficacious tonic in low types of fever, where stimulating tonics are required, invigorating the vital forces in a marked degree. The volatile oil of this plant is more speedily absorbed than most of the articles of this class, hence its more prompt and speedy action as a stimulant. Like all the aromatics it produces an agreeable feeling of warmth in the stomach, increasing the force and frequency of the pulse, and the warmth of the surface, while it diffuses a pleasant glow over the system, without any special influence on the cerebral functions. Its effects seem rather manifested over the organic and sympathetic nervous system, and the capillary circulation.

In addition to its more obvious tonic uses, it may be applied successfully like other aromatics, to relieve spasms, nervous pains, disordered sensations and gastric debility, as well as to remove flatulence, and the colicky pains hence arising. Many practitioners place a good deal of reliance on it in diarrhea and hemorrhoidal affections, while the eclectic school regard it as almost a specific in cholera infantum and affections of the bladder. That it is a remedy of considerable power cannot be doubted, although further researches are necessary to indicate its most appropriate applications. Although we may be unwilling to admit, that its curative power over sores and wounds is such as to entitle it to the name of heal-all, yet we must concede that it possesses no little efficacy in many general diseases. Throughout the middle and western States, there is probably no indigenous plant in more general use as a medicine, or on which greater reliance is placed, and it cannot be supposed that its reputation is wholly without foundation. "In the mountains and hills of Virginia, Kentucky, Tennessee, and Carolina" says Rafinesque, "this genus is considered as a panacea, and used outwardly and inwardly in many disorders; it is applied in poultice and wash for bruises, sores, blows, falls, wounds, sprains, contusions, and taken like tea for headaches, cholics, cramps, dropsy, indigestion, &c."

The general opinion is that the active principle of this plant is volatile, and that the best mode of administration is the *infusion*, made of the fresh root, in a close vessel, and with a very gentle heat. But it is by no means certain or probable, that its active virtues are all dependent upon this volatile principle, for it is well known that the powdered root soon loses its stimulating properties, when exposed to the air and light for any considerable time. The *fluid extract*, or the *tincture*, made with proof spirit, contains all the active constituents of the plant and entirely reliable: the former being preferable in a majority of cases. The *powdered root* is very apt to cause irritation of the stomach, manifested by nausea and vomiting, and is therefore an objectionable form. The *Callinsonin* of B. Keith & Co., is the bitter and resinoid principle, combined with common salt, in the form of a dark brown powder, resembling macoboy snuff very bitter to the taste and recommended to be used in two grain doses, as a carminative anodyne, and antis pasmodic. It seems however to possess scarcely any stimulating properties, and might be employed as a bitter tonic with advantage. The absence of the volatile oil, of course changes very essentially the character of the preparation.

EUONYMUS ATROPURPUREUS.

(Natural Order, *Celastraceæ*; Sexual System, *Pentandria Monogynia.*) Common Names, *Wahoo, Burning Bush, Spindle Tree, Indian Arrow Wood.* The Bark.—*E. Americanus* (*Strawberry Bush.*)

The order *Celastraceæ* of Lindley, is composed of small trees or shrubs, found in the warm parts of Europe, Asia, Africa and North America, though chiefly extra-tropical. The general character of the order is acridity, dependent upon a volatile oil. Besides the *Eonymus*, it includes the *Celastrus Scandens*, or Bitter Sweet so extensively employed in domestic practice as an alterative, diruetic, and cholagogue; considered by the Thompsonians almost as a specific in removing hepatic obstructions, and anti-syphilitic.

The E. Atropurpureus, or wahoo, is a small shrub or bush, growing in woods or thickets, in many parts of the United States. The bark of the root, which has a bitter and somewhat unpleasant taste, is the officinal portion. This production, now cultivated as an ornamental shrub, grows from six to fourteen feet high, and is well known in autumn from its copious crimson fruit, drooping on long peduncles. Its petioled leaves, are oval-oblong, pointed, and parts of the dark purple flower commonly in fours; pods smooth, deeply lobed. The Euonymus derives its name from two Greek words, signifying *good* and *name*, because it has the bad reputation of poisoning cattle. *Tourn*, ("*Lucus, a non lucendo.*")—

The *wahoo* has not yet been accurately analyzed; it is however known to contain a neutral bitter principle, *Euonymus*, with some resin, starch, gum, sugar, &c. The medical properties, as a laxative, tonic and alterative, have been sufficiently established by its use in domestic practice, as to entitle it to a place among the more important remedies of this class. We have known it used as a general alterative in quite a number of cases of chronic diseases, as cutaneus affections, secondary syphilis, torpidity of the liver, with debility of the digestive functions, and with very favorable results. It possesses some antiperiodic power as a tonic and will prove successful in intermittents of a mild grade. In over doses, it acts as a drastic cathartic, attended with some griping pain, and prostration: the discharges being sero-mucous, mixed with bile. It is used, also, by the Eclectics as an expectorant in affections of the respiratory organs, and is said to prove useful in cases of asthma, and dropsy after the effusions have been removed. There can be no doubt that it is a useful laxative tonic, promoting the bilious functions and intestinal secretions, and the carpillary circulation generally. It application to particular forms of disease, must be left to the judgment of the practitioner; the most that can be done or that our limits allow, is to point out the physiological action of remedies, and the indications they are calculated to fulfill.

Preparations of the wahoo are now kept in the shops, from our large drug-manufacturing establishments, and the practitioner will find it to his advantage to obtain them, rather than rely upon domestic pharmacy. Of these the *fluid extract*, *tincture* and *syrup*, are the only ones ever necessary to employ, selecting according to the circumstances of each individual case. The dose of the fluid extract is from one to two drams. The *tincture* may be made by adding four ounces of the fluid extract to twelve ounces of diluted alchohol, of which the dose is from half to one ounce. The *Syrup* is made by adding two drams of the fluid extract to one pint of syrup, of which one to two ounces is a dose. This preparation is well adapted to children, and has proved very servicable in scrofulous affections. The Euonymin of B. Keith is an extremely bitter dark brown colored powder, slightly saline to the taste, and seems to be the powdered alchoholic extract, mixed with some vegetable powder and common salt.—Dose, as a laxative and tonic, from one to two grains, as an expectorant, one-fourth to one grain.

Asclepias Tuberosa in Pleuritis Peritonitis.

By C. G. Polk, M. D., of Frederica, Del.

Among the many indigenous medicinal agents that have attracted the attention of the medical profession there is none possessed of more value in the cure of disease than Asclepias Tuberosa. While its diaphoretic powers are equaled by but few of that class of agents which promote the action of the skin and induce perspiration it is also endowed with unexcelled alterative influence upon serous membranes, doubtlessly subduing Pleuritis —which, if treated by other means would have terminated fatally. An agent possessed of so great curative powers in so severe and often fatal diseases merits a much higher place in the materia medica than has ever been given it, and to call the attention of the profession to its value I now offer a few cases from practice illustrative of its efficacy—believing that thereby a more correct idea may be formed of the merit of the agent than could be gleaned from a long didactic essay upon its therapeutical action. A true inference, I think, can be drawn from the following cases as to the value of Asclepias in my hands.

Case 1.—An Irishman of a very robust constitution, aged 32, exceedingly plethoric, had ever enjoyed uninterrupted good health since his recollection—occupation, a sailor. After being exposed several days to inclement weather was attacked with a severe rigor and intense pain in the right side extending over the right hypochrondrium, tongue coated with a thick yellow fur, pulse numbering 105 beats per minute, very strong, tense and resisting, breathing hurried and difficult—skin very hot and dry. Adopted the following treatment, Feb. 4, 1858. Depletion from the arm until the pulse began to fail. Gave a cathartic of Calomel 10 grains, Comp. Ext. Colocynth 10 grains, and at bed time 10 grains of Dovers Powder.

Feb. 5th.—The bowels have been acted upon, yet the disease still continues unabated; pulse 100 strong and resisting, skin intensely hot, violent headache and intense pain in the side. Prescribed the following mixture:

℞ Fluid Ext. Asclepias (Tilden's)	℥ iij.
Aconitia	gr. j.

Take a teaspoonful every two hours alternated in the intermediate hour by the following:

Fluid Ext. Asclepias	℥ j.
Veratrum	gtt. xx.

Take a teaspoonful at a dose. Apply cold water in cloths to the seat of the pain.

Feb. 5, evening.—Pulse 50 beats per minute, pain nearly gone, patient faint, has a peculiar oppressive sensation in the cardiac region and tingling along the extremities. Breathes with but little difficulty, skin cold—is evidently under the influence of aconite. Ordered two drams of the fluid extract asclepias to be given at bed time and 10 grains Dovers Powder, discontinuing other medicines.

Feb. 6.—Found the patient covered with profuse perspiration, quite easy, pulse 65 beats per minute, bowels regular and natural—there seems to be a slight tendency to effusion in the pleural cavity—to obviate which gave the following every three hours:

Pulv. Squill	gr. j.
Pulv. Digitalis	gr. ss.
Blue Pill	grs. ij. Make into

a pill and take.

Alternated by the following mixture:

Fl. Ext. Asclepias	℥ j.
Spt. Nit. Ether	ʒ ij.

Take a teaspoonful every hour.

Feb. 7.—Further attendance unnecessary. Discharged with direction to take 20 drops of Spt. Nit. Ether every two hours for two or three days. The above case I regard as exhibing in a marked degree, the great power of Asclepias. True, my treatment was inefficient previous to resorting to that agent in not administering a sedative to control the circulation after depletion, yet I cannot believe that I could have saved this patient's life without giving the Asclepias, in which opinion my friend, Dr. H. M. Faust, coincided.

Case 2.—Feb. 6, 1858.—(So much like the above that a careful description unnecessary. It was equally as sthenic in its type.) I treated this case thus:

℞.	Pulv. Lobelia Seed	grs. xv.
	Warm water	℥ iij.

Take a teaspoonful every five minutes until the patient's stomach becomes nauseated, then double the internal until emesis ensues. Take, after the effects of the emetic have passed, the following powder:

Calomel	15 grains.
Podophyllin	1 grain.

Then begin the sedative treatment by giving a teaspoonful every hour of the following compound:

℞	Fluid Ext. Aconite Root	gtts. xxx.
	Fluid Ext. Veratrum	gtts. xxxv.
	Fluid Ext. Lobelia	ʒ ij.
	Fluid Ext. Asclepias	℥ ijss.

Apply cloths wrung out in cold water to the chest.

Feb. 7.—Case seems progressing favorably—pulse reduced to 60 beats per minute, skin bathed in profuse perspiration, pain very slight, breathing nearly normal. Prescribed the compound of yesterday, extending the intermission between the doses to three hours, giving midway between the doses, the following powder:

R.	Calomel	1-12 grain.
	Pulv. Squill	gr. j.
	Camphor	grs. ij.
	Asclepidin	grs. iij.

Feb. 8.—The patient improving fast. Ordered a teaspoonful of the Fluid Extract Asclepias every two hours for a day or two, decreasing the dose gradually. The above cases run a much shorter course than those treated by the usual mode, all formidable symptoms being subdued in a few hours, and the convalescence much shorter. The following case, treated in the ordinary manner, exhibits the great superiority of the new mode of treatment over the old. This is more evident to one who saw the two very

severe cases yield more readily to the Asclepias than the milder to depletion, mercury, tartar emetic, et cetera.

Pleuritis.—Male, aged 26, constitution average, symptoms quite active and well marked.

May 2, 1859.—For want of the remedies employed in the former cases, I instituted the following treatment:

Depletion till pain ceased.	
Cathartic of Calomel and Jalap - -	10 grs. each.
Dovers Powder - - - - - -	10 grs.

May 3.—Found the patient with the pain slight, pulse 88, considerable fever and slight headache. Prescribed 1-6 grains tartar emetic every hour; applied sinapisms to the chest; at bedtime gave the following powder:

℞.	Calomel - - - - - -	grs. iij.
	Pulv. Ipecac - - - -	grs. j.
	Pulv. Opium - - - - -	gr. 1-2 gr.
	Camphor - - - - - -	grs. ij.

Mix and take.

May 4.—Symptoms less active; applied a blister; gave the following powder to remove a slight effusion in the plural cavity:

℞.	Calomel - - - - - - -	grs. ij.
	Pulv. Squill - - - - - -	gr. j.
	Pulv. Digitalis - - - - -	gr. 1-2

Mix and take every three hours, and give in one of the alternate hours two drams of of Spt. Mindererus.

May 5.—Symptoms still abating; some effusion remaining; give Bi. Tart. Potassa in half dram doses every two hours, alternating with

Pulv, Squill - - - - - -	1-2 gr.
Pulv. Digitalis - - - - - -	1-4 gr.
Calomel - - - - - - - .	1-8 gr.

May 6.—The patient is under the influence of mercury; gums quite sore. Discontinued the medicine of the previous day and give 20 drops of sweet Spts. of Nitre every two hours.

May 7.—The patient requires no further treatment.

Upon comparison of the first two cases with the last, a marked difference is exhibited in the result of the two different plans of treatment, and so much in favor of the former, that in the treatment of Pleuritis, I seldom resort to any other.

I have treated about sixty cases without the loss of a single patient. I have also used Asclepias and Aconite in Peritonitis, and found these agents, combined with Morphia, sufficiently potent to control this very severe disease in a few days, and recommend them to the profession as agents of unexcelled efficacy. The fluid extract of Aconite Root and Asclepias Tuberosa, prepared by Tilden, is the form I prefer above all others, and can recommend this form of them with perfect confidence. I regard the Asclepidin inferior to the fluid extract, and regard the alcoholic extract next in value to the fluid form.

The description of the above cases and their treatment is *verbatim* from my note book, and written at the time I was attending them.

THE PHARMACEUTICAL ASSOCIATION.

NINTH ANNUAL CONVENTION.

The American Pharmaceutical Association commenced the sessions of its Ninth Annual Convention, on the afternoon of Tuesday, Sept. 11, at 3 o'clock, in the Hall of the University Building, on Washington Square.

The meeting was called to order by Samuel M. Colcord, of Boston, the President of the Association. He said:

Gentlemen, the time has arrived when we may come to order, and I think the preliminary business is so arranged as to take up but little time. The first business is the appointment of a committee of three persons, to examine credentials and register and report the names of those duly accredited. I will appoint on that committee, Messrs J. M. Maisch, of Philadelphia; Isaac Coddington, of New York, and W. J. M. Gordon, of Cincinnati.

This committee was nominated by vote and in a few minutes presented their report.

The following are the names of delegates from different colleges of Pharmacy:

From the Massachusetts College of Pharmacy.

Thomas Restieaux, Charles T. Carney, Thomas Hollis,
John Buck, Eben R. Blatchford.

From the N. Y. College of Pharmacy.

H. T. Kiersted, William Hegeman, Geo. D. Coggeshall,
John Milhau, Thomas T. Green.

From the Philadelphia College of Pharmacy.

John M. Maisch, Charles Shivers, Wm. R. Warner,
James T. Shinn, Geo. J. Scattergood.

From the Maryland College of Pharmacy.

John Block, Jos. Roberts, J. F. Moore,
James Balmer, Louis Dohme.

From the Cincinnati College of Pharmacy.

Wm. J. M. Gordon, Chas. A. Junghanns, C. A. Smith,
E. S. Wayne, J. C. Parr.

The President next called for the report of Executive Committee on new members of the Association.

Mr. Charles T. Carney, of Boston, the Chairman of the Executive Committee, read a list of candidates for membership. He said the committee were not personally acquainted with each candidate proposed, but they presume that the several delegations from the colleges of Pharmacy could vouch for them.

Mr. John Meakim moved that the committee be allowed until Wednesday morning to examine the list of names, and see that every one was properly endorsed by some member, as eligible, according to the terms of the constitution.

Mr. Carney said the committee had taken pains to ascertain the endorsements of all those names they had received previous to the opening of the meeting, but those proposed since were almost entire strangers, to him at least.

Prof. William Proctor, Jr., said it had been usual for the executive committee to report those names handed in during the recess of the meeting, to be ballotted for separately ; but he understood that this class of applicants was now mixed with those proposed in the present meeting.

The President explained that this was not the case, as there was a separate list of candidates proposed during the recess, which would be read and decided upon as the next business in order.

Mr. Meakim's motion was put to vote and carried.

Mr. Carney next read the list of persons whose applications for membership had been approved by the committee.

The President said it had been usual to vote to declare the names elected at once.

Prof. Procter said, a very usual plan was to ballot for the whole in a mass and if there were indications that there were more than one-third of the votes on the black ball, then it was certain that some one present was certain that some one was objected to: and then it was necessary to separate the ballots.

The President proposed that the members write yes or no on pieces of paper, thus voting for or against the whole list. It would be the shortest way to get through with the business.

Mr. Henry F. Fish of Waterbury, Conn., said that there was one party reported by the committee to whom he should object.

The President suggested that all names objected to by the members, be set over to be decided upon with the list to be presented Wednesday morning.

The list being corrected in this way, a vote was taken in the manner mentioned by the President.

Messrs. Coddington and Joseph Laidley, of Richmond, Va., were appointed tellers. The vote stood, 54 yes, 1 no, and 4 blank. Those on the list were members, and were invited to step forward and sign the constitution.

Mr. Carney read the names of persons who had signed the constitution, and been constituted members by the executive committee since the last session. They are as follows:

Thomas Kinghorn, Brooklyn, N. Y.
Albert J. Congden, E. Greenwich, R. I.
George J. Scattergood, Philadelphia.
William Evans, Jr., do
Joseph L. Moffat, Roxbury, Mass.
W. Prior Creecy, Vicksburgh, Miss.
Francis L. Gaither, Washington, D. C.
J. B. Moore, Danville.

The roll of members were then called, and the following members marked present:

Henry F. Fish, Conn.
William Proctor, Jr., Philadelphia.
T. S. Wiegand, do
P. W. Bedford, New York.
James S. Shinn, Philadelphia.
W. J. M. Gordon, Cincinnati.
Thomas Restieaux, Boston.
Chas. A. Tufts, Dover, N. H.
Joseph Laidley, Richmond, Va.
T. A. Lancaster, Philadelphia.
James Stratton, N. J.
George W. Weyman, Pittsburgh,
Harman Scully, do
Joseph L. Lemberger, Lebanon, Pa.
T. R. Spence, Detroit, Mich.
James Balmer, Baltimore.
Lewis T. Silliman, Columbia, S. C.
H. Warner, Boston.
Edmund Dana, Jr., Portland, Me.
James T. King, New York.
H. M. Whitney, Mass.
John Thompson, Sumpter, S. C.
John Black, Baltimore,
John Buck, Chelsea, Mass.
John Canavan, New York.
William Neergard, New York.
Joseph H. Thatcher, Portsmouth, N. H.
H. T. Kierstead, New York.
Thomas T. Green, do
John Faber, do
W. A. Galatly, do
E. R. Squibb, do
N. S. Harlow, Bangor, Me.
H. A. Tilden, New Lebanon, N, Y.
F. F. Mayer, N. Y.
G. M. Clark, Boston,
J. W. Shedden, New York.
O. D. G. Dort, Geene, N. H.
S. M. Colcord, Boston.
A. Bagden, do
G. C. Close, Brooklyn.

William Evans, Jr., Philadelphia.
G. J. Scattergood. do
H. Haviland, New York.
Geo. W. Berrian, N. Andover, Mass.
C. T. Carney, Boston.
Wm. M. Giles, New York.
J. H. Currie, do
J. M. Maisch, Philadelphia.
I. Coddington, New York.
F. Hale, do
J. Meakim, do
W. B. Little, M. D., San Francisco.
B. J. Crew, Philadelphia.
C. Bullock, do
C. A. Junghanns, Cincinnati.
John Milhau, New York.
E. Dupuy, do
T. W. Metcalf, Williamsburgh.
Levi Tower, Jr., Boston, Mass.
William R. Warner, Philadelphia.
A. H. Wilson, do
R. J. Davis, Brooklyn.
W. H. Pile, M. D., Philadelphia.
W. S. McConville, Worcester, Mass.
R. J. Taylor, Newport, R. I.
H. D. Scully, Pittsburgh, Pa.

The President called for the report of the Standing and Special Committees to be read by their titles or in full, and laid on the table for further consideration. Mr. Carney presented the report of the executive committee.

Mr. Parrish, the Chairman of the Committee on the Progress of Pharmacy, was not present, but the President said he would probably be there the next day, and had requested that his report be mentioned as ready, and lie on the table.

Mr. Carney presented the report of committee on Home Adulterations.

The Chairman of the Committee on Act of Incorporation, was not present and no member of it knew of the existence of any report.

The President said the next business was to appoint a committee to nominate officers for the ensuing year, consisting of one nominated by each delegation in attendence, and three members appointed by the President from among those not delegated to report at the opening of the next session.

The following are the names reported: Thomas Restieaux, from the Massachusetts Delegation; Thomas T. Green, from the New York Delegation; John M. Maisch, from the Philadelphia Delegation; John Block, from the Maryland Delegation; Wm. J. M. Gordon, from the Cincinnati Delegation. The following persons were added to the Committee by the President: William Procter, Jr., Philadelphia, E. R. Squibb, Brooklyn, C. A. Tufts, Dover, New Hampshire.

Mr. Carney, on invitation, then read the report of the executive committee.

Dr. Squibb moved that the report be accepted. He next moved that it be adopted. Both motions carried.

Mr. Fish moved a re-consideration of the last vote, as he understood that the resolution contained in the report was adopted with it, and he would like to make some remarks upon it. [The resolution required all papers intended to be included in the proceedings to be completed and laid before the Association prior to its adjournment.—Ed. Reporter.]

Dr. Squibb seconded the motion.

Mr. Fish said he had no idea of detaining the Association a moment unnecessarially, but the effect of that resolution was to exclude any report which was not presented to this meeting and acted upon by it, and, as there were many papers which it was impossible to finish up immediately, he would suggest to the executive committee to modify the resolution so as to grant a person a few days to finish his report when he had not done so already. The resolution rejected a report entirely if it was not presented.

Mr. Carney said that there was a provision in the resolution that a short delay could be granted to a member by vote of the Association. It might be made to read, if it would better accord with Mr. Fish's view, that delay could be granted by the executive committee.

Dr. Squibb said it was well known that after the adjournment of the Convention, the executive committee rarely got together; and they could only take into consideration such a proposition by writing to one another, as they never live in the same city; and this would cause great trouble and delay in the publishing of the proceedings of the Association. He therefore preferred the original resolution as it stood.

Prof. Proctor said that it seemed to him that when the subject was read, and the question was asked whether the paper to be presented was ready, if the author could not answer in the affirmative there would be time enough for him to request time of the Association to prepare his paper.

Mr. James Stratton, of Bordentown, N. J., moved to adopt the original resolution as it stood. Motion carried.

The committee on nominations were requested to remain in the room at the close of the meeting.

The President asked if it was the wish of the Association to hear the report of the committee on Home Adulterations. The desire being expressed, Mr. Carney, the chairman of the committee, read it.

The report excited much interest; and Mr. Tufts of Dover, N. H. moved its acceptance and adoption, which motion was carried.

Mr. Meakim, at the previons suggestion of the President, offered the following resolution :

Resolved, That a business committee be appointed to take charge of any recommendation in the report of the committees, and of unfinished business, and to offer suitable resolutions for the the action of the Association.

The resolution being adopted, the President named on the committee, Messrs. Squibb, Carney, and Proctor.

As the last business of the session, the President read his annual report, which was received with applause; after which the meeting adjourned until Wednesday morning at 9 o'clock.

WEDNESDAY MORNING SESSION.

The meeting was called to order on Wednesday morning at 9 o'clock, by Mr. Colcord. The attendance was very full. The minutes of the Secretary of the minutes of the previous day were read and accepted. The following members registered their names as present at the Convention in addition to those present on Tuesday:

H. H. Burrington, Providence R. I.
J. M. Clark, Georgia.
J. Jackson, Knoxville.
F. L. John, Philadelphia.
J. G. Wilbur, Boston.
C. B. Guthrie, Tenn.
C. L. Case, Brandon, Vt.
John Carle, Jr., New York.
W. B. Gardiner, New York.
E. Parrish, Philadelphia.
J. C. Cook, Maine.
B. J. Stacey, Mass
C. G. Eggert, Philadelphia.
C. F. G. Collins, Wis.
S. K. Norgrave, Pittsburgh.
E. E. Knapp, Norwalk, Conn.
Paul Balluff, Brooklyn.
W. E. P. Baylis, Brooklyn.
Wm. J. Watson, New York.

The Executive Committee reported the following named persons for membership :

C. F. Cawthon, Mobile, Alabama.
Peter D. Leys, Brooklyn, N. Y.
Richard Forester, do.
Samuel J. Billings, New York.
W. E. P. Baylis, Brooklyn, N. Y.
John Lyman, Chelsea, Mass.
James E. McDaniel, Baltimore.
John McDonald, Brooklyn, N. Y.
C. H. Dalrymple, Morristown, N. J.
William J. Watson, New York.
John Carle, Jr., do.
E. E. Knapp, Norwalk, Ct.
Samuel G. Welling, New Rochelle, N. Y.
John H. Pope, New Orleans.
James Weaver, New York.
William J. Darbey, New York.
James E. Cunningham, Pittsburgh, Pa.
Theodore Molts, Fishkill, N. Y.
Paul Balluff, Brooklyn.
G. G. Potter, New York.
William Ball, do.
C. F. J. Meyer, Fort Wayne, Ind.
S. S. Hubbard, Brooklyn, N. Y.
George C. Leys, do.
Benjamin F. Stacey, Charleston, Mass.
E. L. Johnson, New York.
Edmund Bigelow, Springfield, Mass.
J. A. Wolf, Penn.
Arthur Leitch, St. Louis.
C. M. Wheldon, Pittsfield, Mass.
William M. Gileb, New York.
Isaac M. Sands, do.
Jabez H. Hazard, New York.
William E. Hagan. Troy, N. Y.
George W. Southwick, New York.
Richard J. Owens, Brooklyn, N. Y.
William G. Stephens, Yonkers, N. Y.
H. M. Pettit, Pittsburgh, Pa.
Theodore Schumann, NewYork.
Otto Laist, New York.
G. E. Sheils, do.
Henry Bower, Philadelphia.

A ballot was ordered, the same tellers acting as yesterday, who reported the election of all the above named persons.

Mr. Carney said he had another list of names besides those just elected, some of which had been objected to by members of the Association, and others for whom the committee had received no vouchers ; or if vouchers were handed in they were mislaid. The committee did not report against them, but would place them before the Association.

The President—I understand you that you separate them so as to take separate ballots on them.

Mr. Carney—Yes, sir.

Mr. Squibb—I would enquire whether it would not be better not to read those names. It will do no good to read the names of those objected to. The executive committee have full power in the matter, and I think it would be better to let those names remain with the committee until they receive vouchers for them.

Mr. Carney—The executive committee do not object to them, but they have not felt like taking the responsibility of recommending them without vouchers, and have thought better to submit them to the Association.

Mr. Squibb—I think it would be better not to read the names, but let them lie with the committee until vouched for. It is not expected that the committee should hunt up recommendations, but it is the duty of those who proposed the persons to come forward and vouch for them.

In accordance with Dr. Squibb's suggestion, the names were allowed to remain with the executive committee without reading.

The Committee on the nomination of officers for the ensuing year reported as follows:

President—H. T. Kierstead, of New York.

Vice Presidents—1st, W. J. M. Gordon, Cincinnati; 2d, Wm. Thompson, Baltimore; 3d, Theodore Metcalf, Boston.

Recording Secretary—James T. Shinn, Philadelphia.

Corresponding Secretary—P. Wendover Bedford, New York.

Treasurer—Ashel Boyden, Boston,

Executive Committee.—William Procter, Jr., Philadelphia; Charles A. Tufts, Dover, N. H; J. Balmer, Baltimore; George W. Weyman, Pittsburgh, Pa.; James T. Shinn, Philadelphia.

Committee on the Progress of Pharmacy—John M. Maisch, Philadelphia; Charles T. Carney, Boston; Edward S. Wayne, Cincinnati; John Meakim, N. Y.; P. W. Bedford, N. Y.

Mr. Ashel Boyden, the Treasurer, said: I thank you gentlemen, for the honor tendered me by electing me again for the office of Treasurer; but my business and health are such that I shall be under the necessity of resigning it for another season.

The President—Mr. Boyden, is that positive?

Mr. Boyden—Yes, sir, it is positive. I should be happy to continue but my business and health will not permit.

Mr. Proctor—I should be exceedingly glad if Mr. Boyden would serve another term, but at the same time it is not right to insist on it if it interferes with his business. Could not he serve one year more?

Mr. Boyden said that for the reasons stated he was compelled to decline decidedly.

Mr. Stratton moved that the resignation be accepted. Motion carried.

The office of Treasurer was referred back to the nominating committee.

That committee reported in place of Mr. Boyden the name of Henry Haviland, New York.

The Association then proceeded to the election of President by ballot, Messrs. Laidley, Meakim and Coddington acting as tellers. The vote stood—Kierstead, 38; Meakim, 1; yes, 1; blank, 1.

Mr. Meakim said he desired to withdraw his strong opposition to the popular man and to add it in his favor.

The vote for Vice Presidents stood—Gordon, 34; Thompson, 39; Metcalf, 36; Carney 1.

There were only three votes against any one nominee.

Mr. Parrish moved that the President be requested to deposit a ballot for the remaining officers not elected. Motion carried.

The President deposited his vote for the remaining officers on the ticket proposed by the nominating committee, and they were declared elected.

Mr. Kierstead, the President elect, not being present, W. J. M. Gordon, the first Vice President, was requested to take the chair.

Mr. Colcord retired from the President's seat, and Mr. Gordon took that position amid applause.

Mr. Gordon said:—Gentleman, in assuming the duty of the Chair, I shall not attempt to make any remarks to you. I shall leave that to the President when he makes his appearance, the meeting is now ready for any business that is before it.

Mr. Meakim offered the following resolution:

Resolved, that invitations be extended to the following persons to be present at our meetings:

Dr. Edward Delafield, President of the College of Physicians and Surgeons.

Dr. J. W. Draper, President of the Medical Faculty of the University of New York.

The Honorary Members of the Association.

The Professors and ex-Professors of the College of Pharmacy of the city of New York.

Dr. Squibb wished to make a suggestion to Mr. Meakim to include the following:

The Fellows of the Academy of Medicine; the members of the Pathological Society and of the New York Medical Society.

Mr. Meakim made these additions, and his resolution was adopted.

Mr. T. L. Wiegand offered the following which was adopted:

Resolved, That the thanks of this Association be tendered to the President and the other active officers of this Association for the able manner in which they have discharged their duties during the past year.

On motion of Mr. Colcord, the treasurer then read his report, as follows:

Treasurer's Report for 1859–60.

To the American Pharmaceutical Association:

Your Treasurer in reporting upon the financial condition of the Association has the satisfaction of showing a small balance in the Treasury, although fears were expressed at the close of the last meeting that a contribution would be asked in order to meet the increased demand for publishing nearly double the amount of matter of any former year, and from the fact that a portion of the past years' receipts were used to defray a portion of the former years expenses, but owing to the very economical management of your Executive Committee for the fiscal year just closed, no such contribution was asked for, the credit obtained of the printers and about $200.00 borrowed being sufficient to meet the exigency, which I am happy to say is already liquidated by the response of members to the Treasurer's circular.

The volume of proceedings would make a much better appearance in larger type with more expense upon its publication, and it is propable that in future years so much economy will not be required. If we have our usual success, and increase of members the coming year, we can safely calculate our income at from $1,200, as follows:

Dues not paid for the year 1855	$32,00
“ “ 1856	40,00
“ “ 1857	68,00
“ “ 1858	138,00
“ “ 1859	356,00
“ “ 1860	550,00
Estimate 100 members	200,00
“ certificates	150,00
“ proceedings sold	300,00
	$1834,00
Deducting the amount of dues of 55, 56, 57, 58, 59	$637,00
(In round figures.)	$1200,00

As an amount exceeding any income not likely to come in, we shall have $1200,00 as the least probable income for the ensuing year.

The net statement of the account will furnish you with the receipts and disbursements of my Treasury account, to Sept. 8, 1860, with vouchers accompanying, duly approved. Some omissions in the published roll of members have occurred which I carefully endeavored to correct on the books of the Asociation; and the Index to the Ledger will now furnish a correct alphabetical roll which together with a carefully credited list of members by the Executive Committee will furnish a complete list.

American Pharmaceutical Association, in account with Ashel Boyden, Treaserer:

	Dr.
Rand & Avery's bill of printing and binding Proceedings, &c.	$934,29
Selling certificates	40,22
Sundry expenses as per Ledger	74,02
Balance of Cash on hand	80,89
	1129.80
	Cr.
Cash received of former Treasuser	$231,13
Contributions from Members, per Ledger	554,00
Cash received for Certificates	126,00
“ “ “ Preceedings sold	218,69
	1129,82
Add error in addition	,50
	$1303,21

Ashel Boyden. *Treasurer.*

Mr. Stratton moved that the report be adopted and referred to a committee to audit

Messrs. Squibb, Restieaux and Junghanns were appointed by the chair to act on that committee.

M. Colcord called for the report of the committee on the progress of pharmacy.

This report was a voluminous document of about eighty foolscap pages and Mr. Parrish the chairman of the committee read extracts from it at some length, reserving the rest for publication. He remarked however, that, as it would take up such a large space portions of it might be printed in small type, not to give it undue importance in the proceedings of the Association.

Mr. Colcord moved that the report be accepted and referred to the Executive Committee with full power.

Mr. C. B. Guthrie asked if this had been the usual custom. It was his impression that the Association generally accepted such reports and ultimately took them up to receive such comments as might be made by members.

Mr. Colcord said that now was the time to make such comments.

Mr. Guthrie said that perhaps many who might wish to discuss it were not present now, and to establish a rule that a paper must be discussed just when it was read would compel those who wished to do so, to be there just at the the time which was impractible. Some hour should be set for its discussion. It was a report worthy of consideration, and might receive a better indorsement by being talked about in the Convention.

This suggestion was not acted upon and Mr. Colcord's motion prevailed.

John M. Maisch presented to the Association, several copies of a Swiss Pharmaceutical Journal. As this Journal together with others for some years had been forwarded by a Philadelphia firm without the least expense, he offered the following which was adopted:

Resolved, That the American Pharmaceutical Association acknowledge their obligations to Messrs. Schaiffer & Koradi, Philadelphia, for gratuitously forwarding their exchanges from Germany for several years past.

Mr. Procter offered the following which was adopted.

Resolved, That a committee be appointed to prepare a list of questions for investigation during the ensuing year.

The chair named the following gentleman on that committee: Wm. Procter, Jr., Dr. E. R. Squibb, T. S. Wiegand, Fred. L. John, and Charles A. Tufts.

Dr. Squibb begged to be excused from the auditing committee as he was on several other committees. Mr. T. T. Green was appointed in his place.

Mr. George W. Weyman offered the following:

Resolved, That a committee of five be appointed to examine the Drugs and Chemicals, and other articles offered on exhibition to the Association, and report at a future sitting of the Convention.

Geo. W. Weyman, C. T. Carney, S. M. Colcord, John Canavan and John Meakim were named by the chair on that committee.

Mr. Proctor called the attention of the meeting to the resolution adopted last year, "That it would greatly keep up the interest of the sessions if it be determined to make the reading of scientific papers proceed parallel with the other business." He said that if the reading of the papers were deferred to the later sessions many of the members would be gone, and he suggested that they be proceeded with at once.

The Secretary at the desire of the meeting, preceeded to call for the answers of queries proposed and accepted last year.

On motion of Dr. Squibb, the reading of scientific papers was proceeded with.

Query No. 1 Relative to "Indigenous Vesicating Agents," was not replied to.

Query No. 2. Relative to Citric Acid, was answered by Charles T. Carney, to whom it had been referred.

Query No. 3. Relative of Aconitia, received no answer; Prof. Graham, to whom it was referred, having retired from Pharmaceutical pursuits.

Query No. 4. On the subject of the Production of Alcohol, was answered at a later hour of this sitting by F. Stearns, who had not arrived at this time.

Query No. 5. On the subject of the Varieties of Garlic being called up, Prof. Proctor informed the meeting that Dr. Thomas had engaged in the preparation of a paper in answer to the query, but that it had not come to hand. It was resolved that Dr. Thomas's paper on Garlic, when received, be referred to the Executive Committee for publication in the Proceedings.

Query 6. On Aloin, referred to Edward Parrish, was ready, but not present, and was referred to a future sitting.

Query 7. On Sulphate of Ammonia, was read by Charles Bullock.

Query 8. Relative to Chamomile Flowers, was not answered.

Query 9. On Arnica Flowers, received no reply.

Query 10. On Assafetida Plaster, was read by William Proctor, Jr., and referred for publication.

Query 11. On Atropia, from American Belladonna, was read by the same gentleman, and referred.

Query 12. Mr. Carney informed the Association that Mr. Melvin had not replied to this query from his inability to procure the Japanese wax.

Query 13 On the employment of Parrafine in Pharmacy, was answered by Charles T. Carney.

Query 14. On the Carrageen production of New England, was answered by a paper from Mr. Melzar, which was referred.

Query 15. Relative to Conium Seeds, was answered by Henry F. Fish.

Query 16. On Saffron, and query 17 on Cubebs, and query 18 on Digitalin, were not answered when called for.

Mr. Frederick Stearns, being now present, was invited to read his paper on the fourth subject, which was as follows:

"The subject of Alcohol in the United States, viewed in reference to its manufacture from various sources, its commerce, its impurities, adulterations, and test of purity; and all the statistics of its commercial relations."

Mr. Stearns read a short paper giving a general view of the subject.

Mr. Parrish said he thought it would be an improvement if these papers that were being read were a little discussed. There were, no doubt, a great many present who had ideas, and a little experience of their own, about these matters; and he would be glad to speak on some of them himself. They got sleepy there, sitting all the morning simply listening to these papers.—He continued: I was thinking when our friend here was reading this paper on alcohol, that some one might be acquainted with the subject, and would like to make some remarks. Our friend does not mention an article which the liquor dealers call sweet spirit, one of the productions much used as one of the derivatives of whiskey. I have only recently become acquainted with the merits of sweet spirits, (laughter.) I think it is a great deal better form of alcohol, for a great many purposes in which we employ alcohol, than the rectified spirit, which is often one-half water—or diluted alcohol. The liquor dealers do not like to sell this sweet spirit; it is a new thing, and seems to be a kind of a monopoly of theirs. They keep it quiet, so that the people hear very little of it; it is only very lately that I heard of it. I do not know but we are a little more ignorant about it than we ought to be—until recently I was unacquainted with its existence. I don't know what the experience of others may be.

Mr. Carney—Is that sweet spirit the article otherwise known as deodorized alcohol? I think it is. It is not purified by distillation. It is purified whiskey not distilled—purified by a process known to manufactures. It is not in reality alchohol in the common acceptance of the term.

Mr. Parrish—No, it is not purified whiskey, but merely rectified by distillation. It is about the proof of whiskey, or a little below.

Dr. Squibb—It is simply prepared by leeching the diluted spirit, by passing it through coarsely grained wood charcoal, being arranged in layers on a false bottom in leech tubs. This process frees it from fusil oil, and renders it pure alcohol and water. It, however, takes up from the charcoal some alkaline impurities. After this it is re-distilled, and becomes cologne spirit.

Mr. Parrish—I think it is an article of value, being cheaper than usual rectified spirit, and answering a most excellent purpose for alcoholic preparations.

Mr. Gordon—It is sold by its specific gravity, and is called neutral sweet spirit.

Mr. Colcord—We have an article with us that is called pure spirit, but I never heard the term sweet spirit before.

Mr. Guthrie—For what purpose is it used by liquor dealers?

Mr. Gordon—For the manufacture of imitation brandies and wines.

Mr. Parrish—We have noticed this particular difference between the diluted alcohol and the sweet neutral spirit. When you mix alcohol and water together, the odor is disagreeable, owing to the fact that the alcohol is not perfectly pure. This is not the case when the sweet spirits is used, and the liquors manufacured from it is very much more agreeable than when manufactured from ordinary diluted alcohol of the same strength.

Mr. Stearns—It is generally understood that brandy spirits are made from common whiskey rectified in the manner explained by Dr. Squibb, increased in proof by repeated distillation.

Mr. Procter (to Mr. Parish)—Are there any experiments that you have made to prove that the fusil oil is not present in this sweet or neutral spirit?

Mr. Parish—I have no proof, except that the peculiar odor of that substance is not present: but I consider that sufficient.

Dr. Squibb—The only means I know of purifying alcohol is that one mentioned—the leeching process.

Mr. Colcord, said that there was a spirit sold by Mr. Brainard, of New York, the mode of manufacture of which he believed was kept secret. He supposed it was the sweet spirit alluded to. It was proved as high as 95 or

98 per cent, and the price was regulated by the amount of sweetening. He stated that Mr. Brainerd claimed for this spirit four times the strength of the other, and it would give a better flavor. It was important to know whether this was true or not.

Mr. Parrish—There has lately been published a book translated from the French of Pare Lacour, on the preparation of the liquors which are sold and supposed to be imported. The book struck me as being in advance of anything I had seen written on the subject before. I think we can manufacture at an exceedingly low price a neutral sweet spirit of brandy, identical with that which we can buy at the Custom House. We buy adulterated liquors from across the waters: now I do not think there is any great merit in having them imported. Why not make them ourselves as well? When I say this, I must be understood to enquire whether we ought not to set to work to originate a liquor which we could use in place of brandy, and which at the same time should be officinal.

Mr. Proctor, inquired of Mr. Gordon, if any home brandy could be obtained that could be relied on?

Mr. Gordon—Hardly. Longworth, of Cincinnati, said that the genuine Catawba brandy is very scarce and cannot be manufactured for less than from eight to ten dollars a gallon. It is therefore evident that brandy bought for one-fourth of that sum cannot be pure.

Dr. Squibb was of the opinion that the spurious brandy could be prevented from being brought into the country by proper custom house regulations.

Dr. Guthrie—The real value of brandy, as recognized in the U. S. Pharmacopœia, is a question which interests every druggist and physician. If the fact is notorious, as it seems to be, that brandy is not what it is said to be, even when it is made at home; that it is not what it is theoretically claimed to be; if these things are so, it seems to me of the utmost importance to have a report made upon the subject, in which these facts shall be embodied.

Dr. Squibb—Impure liquors may be kept out of the country by proper inspection, and it can be done if we have the right kind of inspectors. I trust this Association will appoint a committee to take action on that subject.

Mr. Colcord—When we were in Cincinnati we visited the vineyards and wine cellars in that city, and it was said that the Catawba wine was worth a dollar a gallon, and the brandy distilled from that wine would cost six dollars a gallon. The President of that Association has shown that it cannot be made for less than that amount, Now Catawba wine has advanced in price to $1,50 per gallon, and yet Catawba brandy has been offered here in large quantities at $1,50 per gallon. When it was offered to me at that price I tried to elucidate the matter with the seller. I told him of the impossibility of making such brandy at that price; yet he steadily maintained that it was pure. I am informed of the way that brandy is made. After the wine is pressed, you have what is called the pulp or marc left—the seeds, pulp, skins, and other parts of the grape. This pulp is taken and distilled, and there is either a spirit of grain whiskey put to it or else molasses or sugar—something mixed with it; and the *boquet* comes from the skin of the grape. There is enough of this in marc to furnish the boquet for a large quantity of brandy. This is undoubtedly the article which we are receiving as pure Catawba brandy.—God knows what it is made of when it is not pure.

Mr. Gordon said he knew of a party in Kentucky who manufactured a spurious Catawba brandy, and offered it for sale to Mr. Longworth. The agent would not take the responsibility of purchasing it and so referred the matter to Mr. Longworth, who said he would be willing to buy it if the salesman would to take his oath to its genuineness. Upon the naming of this condition the person retired, and nothing more was heard of him; but he met a farmer on the road, and effected an agreement with him to the effect that he should sell the liquor to Mr. Longworth as pure brandy for a premium of five dollars. This the farmer consented to do, and Mr. Longworth bought the article. (Laughter.)

Prof. Proctor presented to the Association for distribution, in behalf of Messrs. Bailliere, Bros., 440 Broadway, a number of copies of the new medical weekly—*The Medical Times*—and also copies of scientific books published by that firm.

The Association then adjourned to half-past three o'clock this afternoon.

WEDNESDAY AFTERNOON SESSION.

The Convention was called to order at half-past three by the Vice President.

The business committee, through Dr. Squibb, offered the following resolution, founded on a suggestion in the President's retiring address last year, recommending the establishment of a third order of members.

Resolved, That a change in the constitutional provision as to the eligibility to membership introduced in the address of the retiring President at the last year's Convention, and since reported on by the committee to whom the address was referred, be referred to the meeting.

Mr Parrish—I move that a committee be appointed to mature this subject with reference to future action of the Association. I will take occasion to say that our association might be very well extended in numbers. We have rather lost sight of that feature since we started. We should have a systematic method of extending our membership, so as ultimately to embrace all reputable druggists and apothecaries in the United States. I presume all druggists and apothecaries will have the same motives as those who have already enrolled themselves as members. We might have thousands as well as hundreds of the names of druggists on our books. if the subject were only brought before them. The annual expense is a trifle, the being a member gives a man a position and a status, or whether it does or not the member thinks it does.—There is a certain satisfaction in being enrolled in some organization. The dea that presents itself to me is that we ought to extend the membership.—The pharmaceutists of Great Britain enroll all druggists and apothecaries of certain qualifications, as laid down in the terms of membership. It is considered essential to be a member. It would be so with this Association if we once had it understood that we were going to embrace all the druggists that are eligible to membership. The result would be a large increase, in the first place, in our numbers, and, in the second place, in our annual income. We might then have a central office and a salaried officer, who should devote his time to the interests of this body, and thus take from the shoulders of our several committees a great amount of that kind of labor which we all know is so hard for them to do. Our worthy treasurer for instance, held the office for one year, and so arduous does he consider the duties that appertain to it, that he is compelled to offer in his resignation this year. All business matters should be given to a salaried officer, and then we should get along much better, and in reality do a great deal more work. There are a great many other things we might systematize; the business of adulterations might be referred to one person, to whom should be sent all those specimens that required analysis. Then again we would obtain immense influence, in reference to our numbers, when we should come to demand any legislative action in our behalf.

Dr. Squibb—I think instead of opening the door wide, the time has come for narrowing it. We do acknowledge qualifications—there is a part of the constitution that applies to it—and there is such a thing as qualifications which are necessary, which we all know. I think the simple fact of paying two dollars and making application is not a good reason, even if he does keep a pharmaceutical establishment, why a man should be enrolled as a member of this Association. I think the establishment of a third order of members to include eclectics, homœpathists, &c., would drive me out of the Association. If we open the door it would probably lessen the influence of this body. I would approve of a committee. however, being appointed to take the matter into consideration. If that committee report upon it favorably, then the Association might discuss it with more light.

Mr. Parrish—The action of this committee would depend a little upon the sentiment we may obtain in the Association now, and it is my misfortune to differ entirely in the scope of this thing with Dr. Squibb. I make a motion, however, and he seconds it. I am not afraid of bringing into the Association reputable druggists—those not sold to quackery. I do not propose to do away with our present qualifications—I do not propose to open the doors and not require vouchers; but I do think that any effort to cramp the Association in numbers is fatal to the grand end it has in view. When this constitution that is now in force was under discussion—was about being adopted, the whole question was then discussed as to how far the door should be thrown open. We had some members who were in favor of making it a simple matter of delegation, so afraid were they of getting some one in the Association not up to the mark. We soon saw that we would never amount to anything; we never had enough men in it to produce any impression, or execute any amount of work, and we adopted the present system. It is now wide open, and we take in all that are eligible. I do not wish to dispense with qualifications.

Mr. Parrish then offered a resolution, that a committee of five be appointed to mature a proposition to have a third order of members, and report at the next meeting of the Assocition.

Mr. Stearns—I do not understand the necessity of this movement at all.—The constitution states that the pharmaceutist and druggist is eligible. Section first reads:

Every Pharmaceutist or Druggist of good moral or professional standing, whether in business on his own account, retired from business, or employed by another, who, after duly considering the objects of the Association, and the obligations of the constitution, is willing to subscribe to them, is eligible to membership.

I do not see any necessity of amendment to the constitution—I think it is well enough as it is.

Mr. Colcord—I think the door is open so wide that the crowd can walk in, in sufficient numbers.

The question was referred to a committee.

John D. Dix being in the room, was called upon to answer the 16th question; referred to him last year, viz:

What are the adulterations of saffron as found in the commerce of the United States, and by what tastes may they be distinguished?

Mr. Dix said: Gentlemen, I owe the Association an apology—in the first place, in taking upon myself to do what I thought I might do, but which I have since found I cannot do. I should very much dislike to present a paper which could not cover the whole subject; and in the multitude of my engagements, and the utter exhaustion that attends them, I found it utterly impractible to write such a paper or get out the facts of the case. The subject referred to me was the adulteration of saffron, Query 16. I then thought I could get at information without difficulty, covering more ground than merely statistical information obtained from the custom house, but I find on questioning my friends who are directly engaged in foreign manufacture, that they were very shy of giving me any information in regard to Spanish saffron. I can only say, that I have at the last moment obtained some samples of the various kinds offered in the market. (Mr. Dix here exhibited four boxes.) This box marked A is the true and legitimate article, and with a glance anybody can discover its genuineness, from the shape of its petals.—The specimen is not handsome, for the reason that the crop was not handsome, but rather poor. It has been imported in this city at from sixteen to eighteen dollars a pound, and it now costs twenty-two dollars to import it. The sample marked B is also true saffron, but about one-half of its virtue has been extracted—perhaps three-fourths—and it is then dried up, and sold as the true article. This was imported in Philadelphia, and there is a considerable quantity there remaining. [Laughter.] It bears all the characteristics of true saffron except the strength. The sample marked C is a large proportion saffron, but is greatly adulterated. It is sold in this market, and imported steadily as the true article. The percentage of adulteration, any person conversant at all with the article can easily detect; it is made up of marigold flowers saturated with the tincture of saffron. The sample marked D is marigolds entirely. It is sold here at from three to five dollars per pound. It is now sold largely in this city, because the druggists will have Spanish saffron if they can get it at a very small proportion of the cost of importation. [Laughter.] I have never known true saffron so dear as last year. We have been able to sell it at nine or ten dollars a pound some times, but it is at this moment worth twenty-two dollars.

The business committee desired to call attention to another resolution laid over last year, offered by Mr. Fish, of Connecticut, and laid on the table at the time. It is as follows:

Resolved, That a committee of three be appointed to consider the propriety of holding annual sessions in the cities of New York, Philadelphia, Boston, Baltimore, and Washington, successively in each year, and also the appointment of a permanent Secretary at Washington, D. C.

Dr. Squibb—There is no need for discussion on this resolution; it is only necessary to adopt it or not.

It was again laid on the table.

The business committee offered the following resolutions:

Resolved, That a suitable member be appointed by the Chair to prepare a full copious Index of the entire Proceedings of the Association, including the volume of the present session, for publication in the tenth volume.

Resolved, That a full set of the Proceedings be placed at the disposal of such member, to be retained by him after the labor shall have been performed.

The resolutions were adopted, and Thomas S. Wiegand, of Philadelphia, was appointed by the Chair, to that duty.

The Chairman of the Executive Committee offered the following names for membership, viz:

John C. Mattern, Pittsburg, Pa.
Jacob F. Haehnlen, Pittsburg, Pa.
Robert Thompson, Bloomington, Illinois.
Warren B. Gardiner, New York City.
George M. Wheeler, Detroit Mich.
William Johnston, Detroit, Mich.
Gustav Ramsperger, New York City.

Dr. Squibb—The business committee had some further business to call up. At the last meeting of the Association in Boston, Mr. Alfred B. Taylor, of Philadelphia offered the following resolution:

Whereas, The generous hospitality of the members of this Association, resident in the different localities at which meetings have been heretofore held, has been extended into an habitual degree of extravagance, which has occasioned much uneasiness among some members of the Association, especially in view of the migratory character contemplated it its organization; therefore

Resolved, That we would respectfully deprecate such demonstrations, and hope that hereafter they may be discontinued, believing that by their continuance we shall be prevented from meeting in many places where, otherwise, we might assemble with great advantage to ourselves, individually, as well as the places visited by the Association.

Some discussion took place about this resolution, of but little importance, and the question was put and lost.

Mr. Colcord presented the names of Franklin K. Philips and W. T. S.

Cardey, who, having retired from business, offered their resignation, at the same time returning their certificates.

The resignations were accepted.

Mr. Stearns thought that the artistic execution of the certificate for membership was not what it ought to be, and urged the propriety of a change in its form. He then offered a resolution to this effect:

Resolved, That as the certificate to membership of this Association is not considered proper in artistic execution, a committee of thiee bc appointed by the Chair to invite designs from artists for the purpose of examination, and aud that said committee be instructed to draw upon the treasury for a sum not exceeding fifty dollars, to pay the necessary expense, and report results at the next meeting.

Mr. Colcord—I do not think any action is called for in this matter. It will be time to act upon such a resolution when the Association shall find it necessary to grant diplomas of qualification, with those who choose to compete with us. I think it will be the case in two or three years.

Dr. Squibb heartily approved of the suggestions of Mr. Colcord.

The resolution was put and laid on the table.

The reading of queries was resumed, and occupied the rest of the afternoon.

The reading of scientific papers being in order, the answer to Query No. 6, on Aloin, was now read by Edward Parrish.

Query 19. This query, relative to the culture of Elaterium, was not answered by Henry A. Tilden, owing to his inability to get the seed in time for the proper season uf growth.

Query 20. Relative to Ergotized Maize, was not replied to by Prof. Thurber.

Query 21. Relative to a test for Extractum Cannabis, was not answered by Edward Parrish,

Query 22. On Gillenia, offered for general acceptance, received no answer.

Query 23. Owing to reasons previously given, was not answered.

Query 24. On the balsamic nature of Gusiac, was answered by William Proctor, Jr.

Query 25. On the changes which spontaneously occur in the officinal Ethereal Oil, and the best means of retarding them, was answered in a paper, illustrated with various specimens of the heavy oil of wine, by Edward R. Squibb, of New York.

Query 26. Relative to the Salts of Morphia, was not answered by Dr. Squibb, owing to unavoidable circumstances, and was continued for next year.

Query 28. On Krameria, was not answered by Prof. Thurber.

Queries 29, 30, 31. Answers were stated to be ready, but the papers were not present, and were postponed till to-morrow.

Query 32. Was not answered by Mr. Cushman.

Query 33. Was not replied to by Dr. Battey.

Dr. Squibb desired to invite the Association to visit his establishment, 149 Furman street, Brooklyn.

Mr. Parrish moved that the subject of the place of the next meeting be taken up to-morrow at 11 o'clock.

Mr. Proctor—If any gentleman present feels that he can investigate a subject for a query, he will please hand his name and the question to the committee on questions.

Dr. Squibb—The business committee would like to know of voluntary papers that are to be read. There is one laid over on the Character of Cavendish, which Mr. Fish had not the opportunity to read.

It was moved that he have such an opportunity to-morrow.

On motion of Mr. Stratton, the Convention adjourned until 9 1-2 o'clock on Thursday morning.

THURSDAY MORNING SESSION.

THIRD DAY.

The meeting was called to order on Thursday morning by Dr. H. T. Kierstead, who was elected on Wednesday as the President for the ensuing year. He said:

Gentlemen,—In calling the meeting to order this morning, I beg leave to render my sincere acknowledgments for the very unexpected honor which the Association have conferred upon me, by electing me to preside over their deliberations. I say unexpected, because I was fully under the impression that some one of my more worthy brethren would have been selected for that station. At the same time I am free to confess a deep sense of gratification at being complimented by this body, and promise to discharge the duties devolving upon me to the best of my ability, relying upon your assistance and forbearance.

Gentlemen, at the time when sectional strife and jealousy have sown the seeds of discord in almost every widespread organization, when not only political, but religious questions have been embittered by mutual distrust and suspicion, it has been eminently gratifying, in such times, to witness the dignified indifference with which this scientific body has pursued the even tenor of its way. No clamor of demagogues has found an echo here—no factious whisper has ever disturbed your harmony. With pure patriotism and philanthropy, you have met from year to year, from north and south, from east and west, to discuss like brethren, questions involving the common good of all. And those of you who like myself, have turned with feelings of melancholy from the spectacle of warring sections, will appreciate the pride with which I respond to your flattering tribute.

May future years confirm the precedent you have so well established, and demonstate that where men's hearts are right, there may always be found some common ground on which patriots from every section may stand together, without a sacrifice of right or dignity. [Applause.]

Gentlemen, we are ready to proceed to business. The first in order I presume will be the reading of the Secretary's minutes.

The minutes were read and approved.

A number of candidates for membership were proposed by the executive and elected by ballot.

Victor Heydenreich, Brooklyn, New York.
Augustine Pressenger, New York city, New York.
George Blinkhorn, Rock Island, Illinois.
Thomas R. Combe, Philadelphia, Pennsylvania.

A ballot was ordered, and Messrs. Cushman and Coddington acting as tellers reported their election.

The President—It appears to be now in order to resume the reading of the queries proposed last year, if any member is here ready to report.

Mr. Proctor—It is usual, Mr. President, to take up the other business at the first portion of the session. The only objection to this course now, is that the chairman of the business committee, Mr. Squibb, is not yet come, but I know that he has some business to propose this morning.

To occupy the time until the arrival of Mr. Squibb, Query No. 31, relative to the commercial varieties of Arrow Root was read and was answered from some meagre notes on a slip of paper by E. T. Ellis of Philadelphia.

Mr. Stearns moved that the subject be referred to the committee having in charge the selection of questions to be made the subject of further investigation.

Mr. Colcord—It was the sense of the Association yesterday, that only finished papers should be accepted here.

We cannot use that paper in the shape it is, as I believe only a part of it is written. If he wishes it published, it is necessary that he should have time to finish it for the printers. I should like to move that Mr. Ellis have a fortnight or ten days to finish his paper, to be referred to the executive committee with discretionary powers. I do not understand what part of it was written for publication.

Mr. Ellis--I did not intend any part of it for publication. I did not offer it for that purpose.

The President—The Chair understands that Mr. Ellis merely submits this as a report in part of progress.

Mr. Parrish—I propose that it be referred to Mr. Ellis for another year.

Motion carried.

The query read in the book of proceedings as follows:

> An inquiry as to the comparative value of the Georgia, St. Vincents', derived from Maranta arundinaceas, Bermuda, and other arrow roots. Whether there are any distinctive characteristics arising from climate, soil, mode of preparation, or any other cause that would give a preference to either.

Mr. Colcord the object of that query was, as I understood it at the time, to establish the idea of what the commercial article known as St. Vincents' arrow-root was. We have the article in market at prices ranging from 35 cents down as low as 12 cents a pound. I understood the question to be an inquipy not as to what the arrow-root is, but as to where it comes from. I look upon the name St. Vincents' as a designation for a dozen different kinds of arrow-root that come to the market. There are also a dozen different kinds of arrow-root which come from all parts of the world, by the name of West Indian arrow-root. The question was put to find if these different arrow-roots were true or false. It was an important query, and I hope we shall have a raper this year, that shall fully settle the question.

Mr. Parrish--I do not think the language of the query would lead any one to suppose that. The question as written seems to include the whole subject of arrow-root. In fact, starch is called arrow-root. There are starches imported into London, England, that are worth from 2 to 3 cents a pound by the ton, and bought by dealers and put up and sold for the ordinary purposes of starch.

Mr. Stearns—I have understood that a large proportion of arrow-root in our market was produced in Connecticut.

Mr. P. W. Bedford said he could not see that the query meant anything in particular as it now stood. He would like to enquire if there was not an erro. in the printing, and if the words " derived from Maranta arundinaceas" should not be at the end of the sentence instead of in the middle.

Upon examination this was admitted to be the case.

A grammatical error was also noticed, viz : "whether there is any characteristics," &c.

The President read a letter from the Faculty of the New York Medical College, addressed to Mr. John Meakim on the outside, but on the inside to the Pharmaceutial Association, which, owing to some considerable delay, had not been received until this morning. It read as follows:

Gentlemen, I have the honor to inform you that, at a meeting of the Faculty of the New York Medical College, on motion it was unanimously resolved that the Faculty respectfully tender the room of the Medical College, 90 East 13th street, to the Association during their Convention in this city.

Signed,

....

Mr. Colcord moved that the communication be received, and the thanks of the Association tendered for the invitation.

Adopted.

The President invited any one to sign the register of members present, who had not done so.

The following names were thereupon added to the list:

C. Shivers, Phila.
Geo. W. De la Vergne, N. Y.
F. Stearns, Detroit.
E. Donnelly, Phila.
M, F. Ash, Jackson, Miss.
C. A. Heinitsh, Lancaster Pa.
Evan T. Ellis, Phila.
W. M. Somerville N. Y.
F. Victor Heydenrich, Brooklyn.
H. Q. Mack, N. Y.
J. Lindley Pyle, Brooklyn.
W. T. Ball N. Y.
Geo. Mowbray, do.
Augustine Presinger, do.

Queries No. 34 and 35 were called by the Secretary, but Mr. Fish, by whom they were accepted, was not in the room at the time. It was stated that he had papers on the subjects.

Subject 36 was as follows:

An essay on the products resulting from the distillation of bituminous coal and allied substances.

It was last year referred to and accepted by Wm. H. Whitmore, of Boston.

Mr. Parrish—I have a letter from Mr. Whitmore, written to me, which if the chairman please I will read—or a portion of it—in order to explain circumstances which Prof. Proctor will make more manifest.

Mr. Parrish read from the letter of Mr. Whitmore.

It stated that he had prepared a report on the subject assigned him last year. Finding some six weeks ago that he should not probably be able to attend the Convention, after some consideration and consultation, decided to print his ideas on the matter, and ask it to be received in that form to be distributed to the members of the Convention. Therefore, he had sent 300 copies directed to their care at University Building to meet them there. He should wait the approval of the Convention before giving away any of them; and the copies sent were at their disposal to be distributed among members of the association; though if the Convention declined to receive the address in printed form, nothing need be said, and he would keep the package.

Mr. Proctor—I will only remark that here is a copy of the pamphlet alluded to, and it becomes a question with the Association whether they will receive it in this form.

Mr. Parrish—The only objection that I see to this report is in the fact that it is printed. To the report there were also appended certain other matters which would not be likely to print in its proceedings, if sent as a part of his report; and in order to understand his report, these other matters seem to be necessary, so that it becomes a question what we shall do with it. It is rendered bulky by the introduction of a number of quotations or extracts from other works, which we might not wish to publish.

Mr. Procter—It is a subject that must be disposed of one way or the other. The question is brought before us by the letter. It is proper for the Association to ask whether they will receive the report in print—it occupies about five pamphlet pages—and then if they will accept this appended matter, which consists of Dr. Storer's history of the manufacture of Paraffine Oils; Patent to James Young; Review of Dr. Antisell's work on Photogenic Oils, &c. The question is, will you receive these and publish them?

Mr. Stearns—Are references made to the appended articles?

Mr. Proctor—Yes, sir.

Mr. Stearns—I move that it be referred to the executive committee with power.

Mr. Proctor—Mr. Whitmore asked permission to report on this subject and it was granted him, and I see no impropriety in having it read.

Dr. Squibb—I would amend that it be read first.

The amendment being carried, Mr. Procter read the original portion of the paper.

Mr. Parrish—I move that the report be referred to the executive committee with power.

Mr. Colcord—I do not see that that report has anything to do with the druggist's business any more than the manufacture of cotton cloth. I amend that it be accepted, and filed with the Secretary's minutes.

Dr. Squibb—I do not agree with Mr. Colcord. It is a report on a subject appointed by this Association, and referred to this gentlemen. I would accept it and publish it in the proceedings; the information in it is certainly interesting.

Mr. Bullock—The course proposed by Mr. Colcord is not often pursued by us. We have generally referred all papers to the executive committee except in one or two cases in which we have ordered them published. If we vary much from this rule it will be a marked course with this paper, and I should like the course adopted, suggested by Mr. Stearns.

Mr. Colcord—It would be a dangerous precedent to accept and refer a report which has been published and distributed.

Mr. Parrish—It has not been distributed—I have no feeling about the matter. I read from the letter that it is not distributed.

Mr. Proctor—The objection of Mr. Colcord, that it does not refer to our business, I think is answered by the fact that the question was given out by the Association to the gentleman.

Mr. Parrish—I would remark, that I think it a very great advantage to have things previously printed; and I should be in favor of our reports being previously printed. For instance, our Report on the Progress of Pharmacy. It would have facilitated matters prodigiously in getting out the proceedings, if this course had been pursued. I think it a fine thing to have a paper printed —it greatly facilitates its reading.

Mr. Colcord—My opinion of the paper is that it is intended as an advertisement of the Clinton Coal Oil Company, Boston, and to be referred as an endorsement of this Association of them. I have no feeling about the matter; I might make an explanation about it. This gentleman wanted to address the Association last year. He was told if he wanted to say anything about coal oil he might write a paper· I think it will be used as an advertisement.

Mr. Proctor—I expected from the gentleman a thorough, scientific investigation of the subject, founded on logical results of his own production, but I must say I think this paper a very shallow affair.

Mr. Stearns—Then I withdraw my motion to accept·

Mr. Squibb—I disagree with Mr. Parrish about the previous printing of reports. I should be sorry to see such precedents adopted. The single copy presented here is all that we want, until we have given authority for its publication. It is a strong objection to this report that it has been printed. It has been through many hands in the process. Other copies may have been printed without his knowledge.

Mr. Parrish—I only mean that the executive committee might so far anticipate the convention, as to print the document beforehand.

Mr. Squibb—I think it would be unadvisable, before the Association hears them.

Mr. Parrish—The Association refers things every day to the committee in this manner. The Progress of Pharmacy Report was not all read, but referred to the committee. There are many objectionable things in it.

Mr. Squibb—We have confidence in the committee.

Mr. Parrish—You would have the same confidence in the case of their printing papers beforehand.

A motion was made to lay the report on the table.

Mr. Colcord—I should prefer not to see that report laid on the table. I object to laying it on the table. I do not wish to say too much of the Boston advertisement—I came from Boston myself—I feel sensitive about it. I know the parties there, and I should hope that the report would be accepted, and had in the Secretaries' minutes.

Mr. Parrish—I am opposed to laying it on the table; it would be an unfair thing. We really know nothing about this man using this as an advertisement. We asked him to send this report; now we lay it on the table. Why? Because he has printed it.

Dr. Guthrie—I move to amend, that the report be accepted and filed in the papers of the Association. I wish to say simply this: As I understand the matter, it will not be impossible—it is not improbable that it may occur to us hereafter to seek for information outside of our corporate members. But if it is known that we have referred any subject, whether trivial or great, to a party who has taken the trouble to report on it probably to the best of his ability, though it may be shallow, and has furnished the Association with that report in accordance with its request; and when the simple dictates of courtesy between gentlemen should compel us to accept the labor, unless there is something absolutely wrong in it, yet, then, we have laid it on the table; would any one else subject himself to similar treatment? If we receive it and file it with the papers of the Association, it does not follow that we publish it. I should dislike that a report which had been furnished at our request, should be treated with the silent contempt which laying on the table would indicate. I therefore amend, that the report be accepted, and filed among the papers of the Secretary.

The amendment was adopted.

[TO BE CONTINUED]

Selections.

FOOD FOR BABES, OR ARTIFICIAL HUMAN MILK, AND THE MANNER OF PREPARING IT AND ADMINISTERING IT TO YOUNG CHILDREN.—This is the title of an admirable little duodecimo from the pen of *Dr. Cumming, of Williamstown, Mass.*

He proposes a plan for supplying *Artificial Human Milk* to infants unable to procure from the maternal breasts, nutriment of the proper quality and quantity. He has adopted this plan in his own household for a number of years with the most gratifying success. He claims that it produces a wonderful immunity from colic, pain in teething, and various disorders of the stomach and bowels; that it contributes materially to uniform growth, prosperity vigor and health, if it does not secure it; and that in many cases it will relieve almost instantly the distressing symptoms of wasting diarrhœa, &c. He states that in composition it closely resembles the natural secretion of healthy and vigorous mothers, and contains all the ingredients necessary for the proper growth and development of the child. This artificial human milk is to be obtained in two ways.

1st. By taking the *upper third* of cow's milk that has *stood* for four or five hours; this containing fifty per cent. more butter than the ordinary milk of the cow.

The second, and in warm weather, the better way, is to take the milk from the latter half of that given by the cow, (containing "strippings,") taking care that the cow be milked dry. In both instances, the milk is to be diluted with 1¼ parts of soft water, and properly sweetened with loaf sugar. The animal from which the milk is to be taken, must be from 4 to 10 years of age, and free from disease of any kind, it being unimportant that she should give a large quantity of milk. Her calf should not be less than two weeks old, and when it becomes four or five months old, the cow is to be given up and another selected. The best feed for the cow is hay and salt and water, which will improve the quality of milk, though the quantity may be less than when other articles of food are employed.

Various dilutions are of course required for various ages.

Thus for the first two weeks after the child's birth it is to be furnished with an *artificial colostrum* which requires the use of the upper *eighth* instead of the upper third of the milk which has stood for four or five hours; or, the employment of the last *tenth* of the milk furnished by the cow.

A schedule is given, arranged to suit the wants of vigorous children of various ages,

Attention is to be paid to the physical condition of the child as well as its age in preparing the required dilution.

The milk should be prepared twice a day in warm weather, unless kept on ice.

The milk is to be administered by means of a bottle, with the neck occupied by an artificial nipple composed of a goose quill rolled up in a strip of muslin, all of which are to be kept scrupulously clean.

The milk should be given at regular intervals, the child taking at each as much as it wants; and the child should be trained to pass 6 or 8 hours at night without being fed.

The temperature of the milk when given should be about 100 deg.; it should be taken slowly, and the flow from the bottle controlled by a proper arrangement of the quill and muslin.

Dr. Cummings thinks this mode of feeding should be continued until the children obtain their full set of teeth, or to nearly the age of two years—or at least rely exclusively on it until 16 teeth are fairly developed, when other food may be gradually commenced with.—*Medical and Surgical Reporter.*

MURIATE OF AMMONIA IN NERVOUS CEPHALALGIA.—Professor Barallier, of Toulon, reports that within the last three years he had administered the substance in 259 cases of nervous cephalalgia, and with success in 202 of these.

He gives forty-five grains combined with mint-water and syrup of orange-peel, divided into three doses, to be taken at intervals of half an hour, amendment commencing after the first dose, and the third frequently not requiring to be taken. To prove effectual, however, the remedy should not be given at the very commencement of a paroxysm, but when it has acquired great intensity. This agent not only gives relief to the urgent pain of the paroxysms, but, after having been had recourse to on several occasions, diminishes the number and frequency of these. To be of use, it must not be indiscriminately used for every cephalalgia; and the result of the analysis of M. Barallier's experience leads to the following conclusions:

1. The muriate almost constantly dissipates paroxysms of idiopathic migraine, and migraine consecutive to too abundant menstruation.

2. It is powerless in the hemicrania which is dependent upon irregularity or suppression of the menses.

3. It is tolerably successful in cranial pains dependent upon disorder of the stomach, and the accidental cephalalgia frequent in women and feeble persons under the influence of sudden changes of the atmosphere, prolonged intellectual labor, or moral emotion.

4. It operates beneficially in cephalalgias consecutive to repeated paroxysms of intermittent fever; those which are observed during the decline of severe fever, and in the course of the irritative period of typhus.—*Bull. de Therap. and Dublin Med. Press.*

"NEURALGIA WITH DEAFNESS CURED INSTANTANEOUSLY BY THE EXTRACTION OF A TOOTH.—M. Ed Vautier records (*Gaz. des Hôpit.*, 14 June, 1860,) a case of this. The subject of it was a very nervous, slender woman, who had suffered for about four months with intense neuralgic pains, radiating through almost all the teeth, and also the muscles of the anterior region of the left side of the head. There was constant lachrymation of the left eye, and from the moment of the attack complete deafness in the ear of the same side. A number of physicians had been consulted, and sulphate of quinia, flying blisters, and atropia, in succession, tried without giving relief.

"When seen by Dr. B., she was suffering severely; had long been deprived of sleep, and could not chew her food. The teeth were examined with care, but no one could be found carious. The wisdom tooth on the left side seemed, however, slightly painful on being touched, and loose. She was advised to have this tooth extracted, but with some temper refused. However, some days afterwards, her physician again advising it, she consented, and the tooth was extracted by M. Vautier. The pains at once ceased, and her hearing was restored. A month has since elapsed without any return of her complaint. She seems to be permanently cured.—*Journal de Méd. de Bordeaux*, June, 1860."—(*American Journal of Medical Sciences*, October, 1860.)

HYPODERMIC MEDICATION BY SULPHATE OF QUININE.—The subject of hopodermic medication is now attracting much attention. Much has been said about its great efficacy in neuralgic affections, where the effect is supposed to be a local one, though, at times, the constitutional symptoms are quite marked.

The results of experiments performed by Dr. I. Sanger, of Davenport, Iowa, with sulphate of quinine, and reported in the *New York Medical Press* for June 16, 1860, prove that this drug, at least, acts after its absorption. The article is quite lengthy, but the following conclusions contain the substance of the author's labors:

"1. Certain agencies most powerful when hypodermically used will become ineffiacious when administered in stomach doses.

2. Sulphate of Quinine injected into the areolar tissue will act quicker, more powerful, and with equal if not with more certainty in subduing the primary symptoms of malarial infections, than when administered by the mouth.

3. Sulphate of Quinine injected under the corium even in large doses, one scruple at one injection, will not produce excessive cephalic symptoms.

4. Sulphate of Quinine injected under the corium, if necessary, during a paroxysm, will be followed with less aggravated symptoms than in stomachic doses.

5. Where the Sulphate of Quinine is indicated, the local irritation of the stomach and appendages constitute no contra-indication.

6. The injection must always be made under the corium.

7. The solution must be rendered neutral to avoid unnecessary pains.

8. For the same purpose, also for dissolving the crystals sometimes precipitated in a solution of Sulphate of Quinine, the temperature of the solution must be increased to blood heat and over.

9. Sulphate of Quinine hypodermically applied is received into the system in a greater state of purity than when given by the stomach, where it may become contaminated or decomposed."—*Boston Med. Journal*, Aug. 2, 1860.

Chloroform Paregoric, of Dr. Henry Hartshorne.—Take chloroform, tincture of opium, tincture of camphor, aromatic spt. of ammonia, of each f ʒ iss., oil of cinnamon gtt. iij., brandy f ʒ ij. Dose, f ʒ ss. or less in spasmodic affections of the stomach, cholera, &c. Several practitioners have used this preparation with favorable results in severe cases.—*Chemist and Druggist.*

To Make a Blister.—Steep cantharides in æth. sulph. for a fortnight, or until the cantharides float upon the surface; skim it off. One dram of cantharides, one dram of white wax, five drams of olive oil, melted together, mix. With a brush paint it over some white bibulous paper, and hang it up to dry in a current of air. Take a piece of pink paper, form and size required, and paint the uncolored side over with a weak solution of india rubber; cut your cantharides paper the form and size (less a margin) of the pink paper; while the india rubber solution is still sticky place it on; when dry roll it up. It is unaffected by damp, is light, portable, blisters with certainty, and without pain. The introduction of the caoutchouc varnish, arrests the perspiration of the part, and increases doubly the certainty while diminishing the time required for application. Before applying, the blister should be held over the steam of hot water. The blister will be effectual for several times.—*Dublin Hosp. Gaz.*

MAYESVILLE, S. C., OCT. 8, 1860.

Newton,

R:—I promised some months since, to give a recipe which would
dicinal preparation, resembling Osgood's Indian Chologogue in eve-
l requisite. I had forgotten my promise until to-day the October
ne to hand. I find a correspondent desires to know the composi-
famous remedy. I can give him a recipe for a most admirable
one which will leave him no longer solicitous about the composi-
'hologogue. He will find the medicine made by this recipe to be
if not identical, in taste, smell and effects, being all that is really

Sulphate of quinine, - - - - - -	ʒ ii.
Tilden's fluid ext. leptandria, - - - -	ʒ i.
Saturated tinct. stillingia, - - - - -	℥ iv.
Tilden's fluid ext. podophyllum, - -	ʒ iii.
Oil sassafras and oil of wintergreen *aa.* - -	gtts. x.
Best N. O. molasses or treacle, q. s., to make 8 oz. mixture.	

re to be well shaken up before a dose is measured; as the quinine,
ssolved,) will settle to the bottom of the bottle. The dose for
a one to three teaspoonsful three times a day. The dose is, how-
er dependent entirely upon the nature of the case; and may be
according to circumstances. Again, the proportion of the ingre-
e altered to suit particular cases. The formula given is extremely
to those cases, marked by very great hepatic torpor; of course
ite conditions, not so much of the stillingia would be required;
portion of the leptandria and podophyllum may also be reduced.
perfectly in breaking up the paroxysms of fever the quinine cannot
n quantity. It usually requires at least one 8 oz. bottle of the
nsure a permanent cure. When Tilden's fluid extracts cannot be
ed tinctures may be used, but in increased quantities; say, rather
louble the quantity given of the fluid extract. In order then to
true balance, the mixture must be made to measure 10 ounces,
sponding increase of dose must be made.

nciple of combining the quinine with those vegetable alteratives
t their influence chiefly upon the glandular system, exciting them
d action, will be readily understood by physicians, and will, if
nerally, lead to a much greater success in the management of mala-
and certainly to a much more satisfactory result in the treat-
sequelæ of those fevers. I may also add, for the benefit of your
respondent, that this cholagogue compound has succeeded perfectly
ases of "dirt eating." If he is a physician, he will readily under-
nodus operandi in such cases. Hepatic torpor with weak digestion,
acteristic of the habit, this combination will be very apt to relieve.
correspondent desires to know how long my attention has been given

to this subject, you may refer him to the "Southern Medical and Surgical Journal," 5th vol. 1849—page 376.

Very truly yours,
J. A. Mayes, M. D.

Editorial.

American Pharmaceutical Association.—We give this month, in detail, the report of this Association, believing the proceedings of so large and important a body as this has now become, having so close relations to the medical profession, will be interesting to them.

Its proceedings were characterized by an unusual degree of unity and harmony which is evidence of a devotion to the objects and aims of the Association on the part of the members, to the exclusion of selfishness and jealousies which too often creep in, engendering personal animosities, to the injury and ruin of volunteer asssociations.

The Society now numbers five hundred and thirty-five; eighty new members having joined at this meeting.

The discussion upon scientific papers and reports we shall publish as we can find space. For the report we are indebted to the *Drug Reporter* and *Journal of Pharmacy.*

Year Book of American Contributions to Medical Science.

We give Dr. Gibbs' Circular in relation to the work he proposes to publish for the medical profession, and shall notice it more fully when it is issued.

CIRCULAR.

The Undersigned proposes to issue a yearly volume with the following title :—"Year Book of American Contributions to Medical Science and Literature."

It is designed that Part *First* of each volume, shall comprise an arranged and classified *Summary* of, and index to, all the important original papers found in the various *Medical Journals* of this country, for the year immediately preceding. Part *Second* will comprise a *Summary* of, and index to, all papers found in the published transactions of the National and the various State Medical Societies. Part *Third* will embrace *Reviews* of all medical books of American authorship, published during the year, with a *Summary* of all the novelties in opinion or practice therein. A copious index will complete the work. To the above plan and arrangement, such other additions shall be made as time and circumstances may suggest. The first volume will be issued early in the year 1861.

For the preparation of our *Monthly Summary of American Medical Journalism*, or *the A. M. Monthly*, we have arranged for all the American Medical Journals (over thirty in number) and at least four of the best European. To facilitate our design, we request a *continuance* of the *exchange.*

American authors of medical works, and publishers of the same, are requested to send to our address a copy of their respective works and publications. Medical Societies that publish their transactions, will, we trust, be kind enough to send a copy of the same to our address. For this kindness of an exchange from Journal publishers, authors, book publishers, and Presidents of Societies, we shall be happy to reciprocate by an *exchange of publications*,

The importance of a work of the character as above, which shall comprise *all there is of interest* in the more than 80 Journals, medical books issued for the year, and the various society transactions, will be readily conceded by all. We cannot prepare the work and publish it at a pecuniary loss, and hence the object of this Circular is to request that all physicians who would encourage the work, and become subscribers to the same, *would send us their names* AT ONCE—payment to be made only on the publication of the work. The work shall contain from 500 to [illegible] pages, to be substantially bound, and furnished at the very low price of *Three Dollars.* That we may know whether the work is to receive sufficient encouragement to justify its completion and publication, *we request that subscribers' names* MAY BE SENT IN IMMEDIATELY. As a special favor we request that our friends will not allow a day to pass before responding to this Circular.

O. C. GIBBS, M. D.,
Frewsburg, Chautauqua County, N. Y.

TO SUBSCRIBERS.

All Subscriptions to this Journal, commencing with January, 1859, expired with the December number of that year.

Will you have the goodneſs to inform its conductors, as early as poſsible, if you wish it forwarded to you regularly, that they may make each edition sufficiently large to supply the early numbers of the current year to all regular subscribers.

The Journal has been enlarged, eight pages having been added to each number of the volume for 1860, making forty pages of reading matter in each number.

[illegible] of the flowers, which vary

Frewsburg, Chautauqua County, N. Y.

THE

JOURNAL OF MATERIA MEDICA.

DEVOTED TO

Materia Medica, Pharmacy, Chemistry, &c.

Vol. II.] DECEMBER, 1860. [No. 12.

Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER XII.

CHELONE GLABRA.

Natural Order, *Scrophulariaceæ*; Sex, System, *Dydynamia Angiospermia.*—Common names; *Balmony*, *Snake Head*, *Turtlebloom*, *Turtle Head*, *Salt Rheum Weed*, etc.

THIS well known North American plant, deriving its name from a Greek word signifying *tortoise*, the corolla resembling in shape the head of a reptile, belongs to a genus containing but few species, one only in the Northern and Middle States; all herbaceous plants, with white, rose color, or purple flowers, abounding in hot places, and flowering from July to September. The present species has a perennial root and an erect stem; from two to four feet high, with subsessile or petiolate leaves, and flowers terminal in a dense short spike.

There are several varieties of the plant, differing in the form and insertion of the leaves and color of the flowers, which vary from pure white to purplish. The leaves are the part used in medicine. They are extremely bitter, but inodorous, and yield, on analysis, a peculiar neutral substance, *chelonin*, some tannin and gallic acid, starch, gum, sugar, &c. Its active principles are imparted to both water and alcohol. The medical properties of the chelone have been, as yet, but imperfectly investigated, but sufficient trials have been made to prove them decidedly tonic, laxative and anthelmintic. It has long enjoyed considerable reputation in popular practice, as a remedy in jaundice and chronic hepatic diseases, as well as for the removal of worms, for which it seems well adapted. That it excites the secretory action of the liver, when given in small and regular doses, cannot be questioned, while, at the same time, it exerts a tonic influence upon the digestive organs, and an alterative effect upon the system generally. Hence it is a highly useful remedy in many chronic affections, where a conjoint depurative and tonic indication is present. As an alterative, we combine from one to two grains of *chelonin* with two grains of rhubarb; as anthelmintic, two grains of *chelonin* may be combined with one grain of *gelseminin*, or ten grains of powdered *wormseed. Iron by hydrogen* also forms a good combination in such cases. As a tonic, it is well adapted to cases of atonic dyspepsia and convalescence from acute diseases. In hepatic torpor with tendency to constipation, it will be found a highly useful remedy, but not to the exclusion of occasional adjuvants, as the mild mercurial preparations.

The *chelonin*, *fluid extract*, *tincture*, and *syrup* are the only preparations that need be employed. The *chelonin* is preferable where the pillular form is desirable, and may be given in doses of one to two grains, while the *fluid extract* in doses of one dram is well adapted to a majority of cases where a stomachic effect is indicated. The *tincture*, prepared with one ounce of the leaves to one pint of proof spirit, or one ounce of the fluid extract to eight ounces diluted alcohol, may be given in similar doses. The *syrup* is well adapted to many cases, especially of children, and as anthelmintic, and may be extemporaneously prepared by adding half an ounce of the fluid extract to twelve ounces of syrup; dose, three to five drams. The above preparations of this plant are now kept in the shops, of Tilden's manufacture.

CEANOTHUS AMERICANUS.

Natural Order, *Rhamnaceæ.* **Linnean System,** *Pentandria Monagynia.*--**Common names,** *New Jersey Tea, Red Root.*

This genus consists of shrubby plants having large, reddish roots. The leaves are alternate, and nearly ovate or eliptical, while the flowers are white, blue or yellowish, in umbel-like fascicles, aggregated at the extremity of the branches. All the species have similar medical properties.

This plant is found extensively throughout the United States, in dry woods, and flowers from June to September. No correct analysis of it has yet been made. It no doubt contains a peculiar alkaloid or resinoid principle, with considerable gallic acid, gum, starch, &c. The leaves, when dried, have much the odor of black tea, for which it was considerably used during the revolutionary war. The leaves have also a slightly bitter and astringent taste, but less strangely marked than that of the bark of the root, which is extremely bitter, and affords a cinnamon colored dye.

This plant is well adapted to all cases where a mild astringent tonic is indicated. It forms an excellent gargle in the apthae of children as well as the various forms of cynanche, in which the throat and fauces are involved. It has been used with success in dysentery and chronic diarrhœa, as well as an antiperiodic in malarious fevers. Among the Indians it enjoys great reputation as a febrifuge and astringent, and as a remedy for gonorrhea and syphilis for which a strong decoction is used. According to Ferrien, gonorrhea is very speedily cured by this plant. It makes an excellent astringent wash for flabby-conditioned ulcers and sores, and for an injection in leucorrhea, gleet, &c. An infusion has been found highly useful in chronic ulceration of the gastro intestinal mucous membrane, as well as morbid relaxation of the same.

Its preparations and doses are the same as those of chelone, although not, as yet, kept in the shops.

CEPHALANTHUS OCCIDENTALIS.

Natural Order, *Cinchonaceæ.* **Linnean System;** *Tetrandria Monogynia.*—**Common names;** *Button Bush, Pond Dog Wood, Globe Flower, White Ball,* &c.

This well known shrub, the only American species of the plant, grows from three to fifteen feet in height, has opposite or alternate leaves and terminal flowers, forming balls of a cream white color, about an inch in diameter, on peduncles of two inches long; growing in low wet situations or on the banks of streams and ponds. There are several varieties, flowering in July and August. The flowers have a peculiar and heavy odor. The wood is light and spongy. The whole plant is bitter, especially the bark of the root, which when dried, somewhat resembles Cascarilla in appearance and qualities. The active principles are volatile oil, bitter extractive, gum, starch, &c. Its medical properties are those of a laxative tonic, with considerable antiperiodic powers. Hence used extensively in many places, especially at the south, in the treatment of intermittents. The inner bark of the root is an agreeable aromatic bitter, and has been recommended in obstinate coughs. This plant is also one of the favorite remedies among the aborigines.

Preparations the same as the chelone, &c.

DICENTRA EXIMIA, CUCULLARIA AND CANADENSIS

Natural Order; *Fumiaraceæ.* **Sex, System**; *Diadelphia Hexandria*, **Common names**; *Turkey Corn*, *Stagger Weed*, &c. THE BARK.

The Fumatory family of plants in the United States embraces three indigenous species, all possessing bitter stems and watery juice, delicate smooth herbs, with compound dissected leaves and irregular flowers. They are the *Adlumia*, (*Climbing Fumitory*) *Dicentra*, (*Dutchman's Breeches*) and *Corydalis*. The *Fumaria*, or common Fumitory has been introduced from Europe. All are endowed with mild tonic and alterative properties.

The *Dicentra* has not been elaborately analyzed, but it is known to contain a peculiar bitter principle, *Dicentrin*, analogous to Corydalin, with the other organic constituents common to most other plants. Its medical properties, though not so strongly marked as those of some other of our native plants, are nevertheless sufficiently valuable as to entitle it to a respectable rank among our indigenous tonic alteratives. Its virtues are certainly equal to those of the foreign *Fumaria*, so highly praised by Cullen as an alterative in cutaneous affections. It possesses no acrimony or astringency, and acting on the kidneys, skin and liver, may be called a general depurant. Indeed, it has been maintained by some practitioners at the South that it is a good substitute for mercury in venereal complaints. Our experience has not been sufficient to enable us to express any opinion on this point, but we believe it will be found highly useful in this class of complaints, and especially in affections of the skin, of a scaly character, as lepra. It has also been found efficacious in scrofulous diseases and obstructed menstrual flow. In some parts of the country it is employed as an anthelmintic. It has the properties of the pure bitters, as gentian, columbo, &c., and may be substituted for them.

Preparations of this plant from the manufactory of the Tildens are now found in market, enabling the practitioner to test its medical value more satisfactorially than has hitherto been done. These are the *fluid extract*, *corydalin*, *tincture* and *compound syrup*. The dose of the fluid extract is from half to one dram; of corydalin, one-half to one grain; while the tincture is made with three ounces of the fluid extract to one pint diluted alcohol, of which the dose is one to two drams. The compound syrup is made of two ounces of the fluid extract, one ounce of fluid extract of blue flag to eight ounces of syrup, of which one-half to one dram is an ordinary dose. As an alterative in syphilis, it is recommended to combine eight grains of corydalin with ten grains hydrastin, and divide into twelve powders. In scrofula, as well as syphilis, it may be combined with advantage with xanthoxylin in the proportion of two grains of corydalin with six of xanthoxylin, divided into three powders to be taken daily.

ARTEMISIA CAUDATA. (*Slender Wormwood.*)

A. Ludoviciana, (*Western Mugwort.*) *A. Biennis*, (*Biennial Wormwood.*)
Natural Order; *Compositiæ.*

Three species of wormwood are found in North America possessing the same medicinal properties as the officinal (*a absinthium*,) and though as yet, not introduced into regular practice, they may be substituted for the foreign species. Like this, they may be employed as stomachics, anthelmintics and all the purposes of the simple bitters, whether in the form of infusion, tincture, fluid extract, powder or syrup. They also possess emmenagogue properties. There is no satisfactory evidence that any of the species of artemisia possess narcotic properties, although this opinion has extensively prevailed. The species generally contain more or less volatile oil in combination with a peculiar bitter principle (*absinthin.*) They are somewhat diuretic as well as diaphoretic. Formerly they were much used in intermittent and remittent fever, but their antiperiodic power is feeble. The officinal wormwood, according to Griffiths, acts as an irritant and stimulant in large doses, and appears to affect the cerebro-spinal system, causing vertigo, headache, &c. Hoffman recommends the essential oil as an antispasmodic and anodyne. On the continent of Europe, the wormwood is in general use as a bitter, and as a remedy for dyspepsia. The infusion or fluid extract is the best form of administration.

But little need be said of our remaining tonics. Of the well known *tanacetum* (*tansy*) we have one indigenous species possessing the same properties as the exotic *T. vulgare*, viz; *T. Huronense*, abounding on the shores of the great northern lakes, and northwestward. We have eight species of *sabbatia* and nine of *gentian*, all of which are endowed with tonic properties.

The *lichens*, or *lichen tribe* of plants yield a considerable number of genera and species which may be employed in the arts or as demulcent tonics and nutrients. The nutritive properties depend on the presence of an amylaceous substance, analogous to gelatine, which, according to Berzelius, exerts in the form of pure starch or amylaceous fibre to the amount of 80 per cent in the Iceland moss (*Cetraria Icelandica.*) This abounds in the mountain districts of the northern parts of our continent, although that kept in the shops is brought from Hamburgh, and said to be the produce of Norway and Iceland. The *Irish moss* or carrageen, (*chondrus crispus*) is also found in all the northern parts of this country in quantities sufficient to supply the world. It abounds especially on rocks and stones on the coasts of Maine, Nova Scotia, Newfoundland, Labrador &c; although it is chiefly collected for dietetical and medicinal uses on the west coasts of Ireland, then washed, bleached and dried in the sun. We have also the *tripe de roche*, on which the Canadian hunters are often forced to subsist, a name given to several species of *gyrophora.* The reindeer moss which furnishes tne winter food for that animal, is the *cenomyce rangiferina.* We have also the *alaria esculenta*, which is ea ten by the coast population of the north of Ireland and Scotland; also, the *rhadymenia palmata*, the *dulse*, of the Scotch and the *dillisk* of the Irish.

We have seen this plant in the west of Ireland forming the chief relish to his potatoes that the coast peasant enjoys. But its use is by no means confined to the poor but extends to individuals of all classes. It may be seen exposed to sale in the fruit stalls in the towns of Ireland, and may be seen in similar places in the Irish quarters of New York. In the Mediterranean, it forms a common ingredient in soups, and during the famine years in Ireland, M. Soyer attempted to teach this use of it to the Irish; but they could never learn to like it cooked, unless, perhaps, fried.

The chemical composition of these lichens shows the same constituents. The *cetraria*, for example, in 100 parts yields

Green wax,	1.6.
Yellow extractive,	7.0.
Bitter matter,	3.0.
Uncrystallizable sugar,	3.6.
Gum,	3.7.
Starch,	44.6.
Starchy skeleton,	36.2.
Gallic acid,	trace.
Salts of potash and lime	1.9.
Total,	101.6.

The bitter *principle* (*cetrarin*,) exists in all the above genera. The *chondrus* yields in 200 parts:

Vegetable jelly, (*carragenin*)	79.1.
Mucus,	9.5.
Two resins,	0.9.
Fatty matter and free acids,	traces.
Salts of soda and magnesia,	2.0.
Fibre, water, &c.,	8.7.
Iodine and bromine,	small quantity.

The *carragenin* is a peculiar modification of *mucilage*, and identical in composition with *starch* and *sugar*, (C^{12}, H^{10}, O^{10}) and by digesting a short time with dilute sulphuric acid, the whole plant is converted into sugar and gum. These substances are well adapted to cases requiring a nutritious and easily digested aliment, and a mild tonic not liable to disorder the stomach. They are accordingly used with considerable advantage in chronic affections of the pulmonary and digestive organs, as phthisis, chronic catarrh dysentery, dyspepsia, diarrhea, also, in rickets, scrofula, irritation, of the bladder and kidneys, and enlarged mesenteric glands.

We have also, indigenous to our rocky northern coasts, the

Porphyra vulgaris, and *P. laciniata*, which, in winter, is collected on the northern shores of Europe, and served up, after being boiled several hours, under the name of *marine sauce*, *slake*, *slouk*, or *sloucawn*. It is highly relished by many, eaten with lemon juice or vinegar, and even put up in hermetically sealed cans for use at sea at some of the British establishments for preserving fresh vegetables. This, like the other species, is antiscorbutic, and useful in scrofulous affections and glandular swellings; probably from the iodine it contains.

In preparing a *decoction* of any of these lichens, half an ounce should be macerated in cold or warm water for ten minutes, then boiled in three pints of water for a quarter of an hour and strained through linen. It may be flavored with sugar, lemon juice, orange peel, essence of lemon, or other aromatics, as cinnamon or nutmeg, to be used as a common drink.

A *jelly* may be prepared by adding sugar to the strained decoction and boiling down until the liquid is sufficiently concentrated to gelatinize on cooling. By adding milk instead of water, a *blanc mange* is obtained; flavoring ingredients to be employed as above. To separate the bitter principle, infuse for one hour in a weak solution of soda or potash, and repeat if any bitterness remains.

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Trillium as a remedy in Flooding, Menorrhagia, and Leucorrhœa.

BY E. G. WHEELER, M. D.

Although my experience with the trillium is quite limited, yet, in the few cases I have treated with it, the effect has been so speedy and decided, that I have been led to the conclusion that it may be relied on as more prompt and certain in its action in suppressing uterine and vaginal discharges than any other known remedy.

The following cases, selected from some of the most prominent ones in which I have relied upon this article alone, may go to show, in some measure, its efficacy in these conditions.

Case I. *May* 1, 1859.—Mrs. G., at the third month of pregnancy, was taken at 6 o'clock, A. M., with a bloody discharge from the uterus, with pain in the back, considerable sickness at the stomach and occasional chills. I was called in at 9 o'clock, the same morning. The flooding had greatly increased during the last hour, and the patient fainted as I entered her room. The pains had ceased—os uteri dilated to about the size of a twenty-five cent piece, but rather tense. Loss of blood very great. I made a strong infusion of the trillium root and gave two tablespoonsful every ten minutes. In half an hour the bleeding had greatly diminished. The iufusion was continued, but given at rather longer intervals, and in two hours from the time that I was called in, the hermorrhage had ceased altogether. Pains returned during the following night, and the fœtus was expelled with but very trifling loss of blood.

CASE II. *March* 7, 1860.—Was called at 4 o'clock, P. M., to see Mrs. S., at the full term of pregnancy. Os uteri dilated to the size of a half dollar—no pains—flooding excessive. Administered the trillium as in the preceding case. It acted promptly, so that in an hour from the time of giving the first dose, the bleeding had entirely ceased. In about four hours more, labor pains came on, and she was shortly delivered of two healthy children, with no more than the usual amount of hermorrhage.

CASE III. *Oct.* 7, 1860.—Mrs. M., at about the third month of pregnancy, had been attended with slight uterine hermorrhage for two or three days previous. At 8 o'clock, in the evening of the day of date, she became alarmed from sudden and excessive flooding. I was immediately called in, but her fainting turns were so frequent and so protracted, that I could not give the remedy as fast as I desired; and notwithstanding I brought all the means to my aid that I could command, I greatly feared that I should lose my patient. In about three hours, however, she had taken an infusion made with about three drams of the bruised root, as nearly as I could judge, and the hermorrhage was perfectly controlled. Thirty-six hours after this, pains came on and the fœtus was expelled with no further trouble.

It may not be amiss to state, in this connexion, that I think I have found the remedy of decided utility in several instances in facilitating labor.

In cases of menorrhagia, as well as of leucorrhœa treated with trillium, the results have been very satisfactory.

The plant I have made use of is the *trillium atropurpureum*—abundant in the New England States, and probably a variety of the *T. erectum.*

Having thus briefly expressed my own views in regard to this plant, I beg leave to hope that other members of the profession who may have used it more extensively, and had cases under their care that would throw further light upon the subject, will have the kindness to communicate the results of their observations through the pages of the JOURNAL, as I consider it important that the remedial virtues of this, as well as of all other indigenous agents should be fully elucidated aud established.

A Case of Precarious Menstruation.

By J. B. SOMERS, M. D., of Seaville, N. J.

I feel it not only a duty but a pleasure, Mr. Editor, to place within your hands an account (however imperfect it may be in detail) of a case that has recently been under my charge. It is that of a girl now nine years of age, who commenced to menstruate in the spring of '59, being then at the age of seven and a half years.

The case having afforded me no little interest, I doubt not that it will also be satisfactory to some of your readers. She commenced to menstruate in May, of the above year, having completed her seventh year the previous October, and continued thus to do until the following spring, when she became anæmic and dejected, and her menstrual flow suddenly ceasing. Upon the least exercise her respiration was greatly hurried, and ever likely to swoon upon the least excitement. Her pulse became enfeebled and appetite ceased. In this condition I found her, surrounded with friends filled with alarm, which, by the way, did not tend to lessen the excitability of her mind. She was placed upon the use of chalybeate preparations, stimulating food, and, with moderate out-door exercise, began immediately to amend. As amendment advanced, more vigorous exercise was demanded, and ere she had completed her ninth year she was as healthy and robust as any of her playmates. Her catamenia was restored as her general health improved, and that it may hereafter be well with her, she is "out on the ocean sailing." Although young, she has the appearance of age, but in intellect as well as in years she is no more than a child. Her parents are of moderate circumstance, nor has she ever known in her country home those luxuries which parents in city life too often bestow upon their children. In this climate and under such circumstances, may I not ask are not such cases rare? nay, are they not almost unknown?

The cause being undoubtedty a preternatural development of the ovaries.

On the Use of Mullein (Verbascum Thapsus) in Chronic Bronchitis.

By H. Wilson, M. D., of Boonsboro', Maryland.

Chronic bronchitis is universally admitted to be one of the most obstinate and difficult affections with which physicians have to deal. This difficulty proceeds more from the locality than the nature of the disease; more from a want of access to the mucous membrane of the bronchiæ, than from the absence of proper remedies to control the affection. Counter-irritation and the inhalation of chlorine, iodine, and expectorants, with such like means, have been used for centuries, but all physicians know, from experience, that the benefits derived from their use are merely temporary and palliative, and seldom bring about a radical cure; still they are the best remedies which we have at command, and it is but right that we should avail ourselves of their medicinal virtues. The long standing inflammation of the lining membrane of the bronchiæ seems to demand the contact and application of some powerful agent, in order to produce a new impression, and thereby change the morbid action of the part, before a healthy reaction ensues.

The successful introduction of the probang, armed with a sponge and nitrate of silver, as employed by Dr. Horace Green, of New York, into the larynx and trachea, has been a great triumph for American science, and peculiarly adapted to accomplish the desired result, By this means he has been enabled to apply cauterization to the diseased mucous membrane of the bronchiæ, and in a short time to destroy all traces of morbid inflammation. But how few are there that can do what Dr. Green has accomplished? The precise knowledge of anatomy and skillful manipulation of the probang, which are required to introduce that instrument through such a narrow opening as the rima glottidis, will induce most surgeons to pause before the attempt is made. If such men as Professors Erithsen, and Trousseau, with Dr. Marshall Hall, and other eminent European surgeons, declared that its introduction was an impossibility, without producing death, it can scarcely be expected that physicians and surgeons, who have but little opportunity of experimenting on the living or dead subject, would undertake such a delicate operation. It is, therefore, of little practical benefit to the majority of surgeons.

The frequency with which bronchitis is met among clergymen and others, renders the discovery and use of any means which may be servicable, either as palliative or curative, a matter of importance. For several years past I have been in the habit of using a remedy, which may not be new, but which far surpasses that of any other which I have tried in relieving, and, in many instances, entirely eradicating the affection. I refer to the leaves of the common mullein, (verbascus thapsus) dried, and smoked in a pipe. In that form of the disease in which there is a dryness of the trachea, *with a constant desire to clear the throat*, attended with little expectoration and considerable pain in the part affected, the mullein, smoked through a pipe, acts like a charm and affords instant relief. It seems to act as an anodyne in allaying irritation, while it promotes expectoration and removes that glutinous mucous which gathers in the larynx; and at the same time, by some unknown power, completely changes the character of the disease, and, if persevered in, will produce a radical cure.

In no respects are its beneficial effects more striking than in its power of immediately allaying the desire of "clearing the throat," which is a source of constant annoyance to the patient, and which is so apt to disturb his rest at night. The remedy needs but to be tried to prove its efficacy.

I will give two or three cases in point. A few months ago, the Rev. Mr. S., a minister, who had been preaching regularly for several years, came to my office and told me he shortly intended to discontinue his vocation, as he found it impossible to preach in consequence of a sore throat. He said he had been suffering for several years, and now found his health growing rapidly worse. He regretted the necessity very much, for many reasons. I examined his case, and found he had chronic bronchitis. He told me he had been constantly under medical advice, and had tried everything, but nothing had done him any good, and now he had become quite discouraged. I recommended to him the mullein, which he promised to give a faithful trial. In two months from that time he returned to me, looking the picture of health, and in fine spirits, and told me he felt entirely relieved. He said money could not induce him to part with the remedy. Wherever he goes he carries his pipe, though he has had no return of the disease.

Shortly after this case, I had that of a young lady, who had been suffering for two or three years. She had been under the care of an excellent physician. In addition to inflammation of the bronchiæ, which seemed inclined to extend to the lungs, her larynx and pharynx gave evidence of considerable inflammation. She was also annoyed with a constant hacking cough and a desire to clear her throat. The usual remedies had been tried in her case, but without any beneficial effect. In two weeks' time, by means of her pipe and the mullein, she experienced wonderful relief, and is now, to all appearances, convalescent. Her fears have been allayed and her health restored.

I, myself, for ten years, was a sufferer from chronic bronchitis. Every evening I became hoarse, and experienced great pain, dryness of the trachea, and a constant desire to clear my throat, which, in doing, not only disturbed my own slumbers but that of others. I tried cauterization of the pharynx as low down as possible with argenti nitras, counter-irritation, expectorants, and inlalation, but all to no purpose; finally, I commenced the use of the mullein, and nothing could have been more speedy and efficient in affording relief. I would recommend its trial as the best means of testing its virtues.

The mullein may be gathered from almost any field at all seasons, and should be first dried, and the leaves smoked in a pipe like tobacco, at least two or three times a day. It is not unpleasant, and, unlike tobacco, requires almost constant smoking or drawing, or the fire will go out.

The remedy is simple and harmless, but potent. It is one of those means which nature has so bountifully supplied, which are within the reach of all, and is but an evidence that we need not resort to chemical combination for all our most valuable remedial agents; but, if we look around, we may find them at hand ready for application.

Report on Home Adulterations.

The Committee upon the subject of Home Adulterations, appointed at the annual meeting of this Association held in Boston last year, respectfully report:

The subject of Home Adulterations is one worthy of the careful consideration of every member of society, whether pharmaceutist, physician or consumer—and *all* belong to the latter class—because of the pernicious and often dangerons results which ensue from the use of articles mixed with deleterious substances, or deficient in power, owing to inert substances used to enhance the profit of the unscupulous tradesman.

Your Committee feel deeply the responsibility of their duty; they feel that much ought to be said and done which they dare not take the responsibility, as individuals, of saying and doing. They trust that the time will come when State legislators, or the General Government, will cause such penalties to be affixed to the selling of adulterated articles that the business will cease to "pay," and that "honesty" will be practiced because it *is* "the best policy." During the past year your Committee have had many articles of drugs, medicines and food submitted to their examination, and they have felt more and more the necessity of some means being devised for checking this abominable practice, which, in the language of another, "is undermining the very foundation of trade, viz: faith in commercial integrity."

We refer to our published report in our last year's "Proceedings" for the definition of an adulteration as given by Dr. Hassall, of London, who has done more than any other to draw public attention to the alarming facts of this species of fraud. He says an adulteration consists in the intentional addition to an article, for the purpose of gain or deception, of any substance or substances, the presence of which is not acknowledged in the name under which the article is sold. The change of an article entirely, and selling it under a false name in place of another, constitutes a *substitution* and not an adulteration.

Thus briefly referring to the introductory of our last year's report, we would say that all the views we there express we still sustain. We have, during the past year seen nothing to cause us to change our opinion as to the dangerous and hurtful tendency of this unlawful practice; on the contrary, all our experiences confirm us in the views we there express, and tend to convince us more fully that the public do not know the extent to which they are cheated, nor would any intelligent community submit to the imposition were they once fully aware of the danger and risk they are exposed to.

Adulterations are practiced for three principal reasons, as briefly stated by the author of "Falsification of Food:"

First.—For the purpose of making the substance more salable, by improving its appearance by the addition of some body, either innocuous or otherwise.

Second.—To depreciate the quality by adding some substance which will diminish the *real*, without altering the *apparent* strength or general appearance. This is generally a very deadly fraud.

Third.—To depreciate quality and "extend" the quantity, by the addition of some simple substance, as water, or, if a solid body, as sand, gypsum, &c.

The matter of adulteration of articles of food is quite properly within the scope of a report on Home Adulterations; and your Committee propose entering somewhat largely into this part of the subject, trusting that the Association will grant them indulgence.

It is a sad and alarming fact that "death lurks in the pot;" that the community are exposed to injury, disease and death, by the very food they live upon, and the tea, coffee and water they drink.

It is often urged in deference to many of these nefarious practices, such as the addition of some of the salts of copper and lead, or cocculous indicus, to articles of daily consumption, that they are "used in *very small* quantities." We grant the statement to be true, and are deeply, we trust truly, grateful, as we ought to be, that we are not murdered outright, but scientifically and handsomely killed by inches.

Who can estimate the results of the continued introduction into the system, day by day, and month by month, of these poisonous additions to articles of food. No substance, however small its daily use, which is decidedly poisonous and pernicious, can be used without producing, finally, disease and even death.

Any physician can tell you of cases where the seeds of painful and lingering disease have been planted by some slow, insiduous poison. All of you are doubtless aware that disease often arises from the use of water through lead pipes; and who can say that of the many cases of "unknown disease," some of them may not have been caused by poison taken in the small but oft-repeated doses of the daily food.

We are aware that many, and among them even those of scientific reputation, scout the idea of any trouble arising from water through lead, but your Committee feel that it is of such great importance that they cannot pass it by without a brief notice. It is a question upon which scientific men have differed; but with the present knowledge of the subject that we have, your

Committee can but recommend, in every practical case, the use of some other substance than lead for the conveyance of water to be used for drinking purposes.

Where so large a possibility of injury exists, prudence would dictate an entire avoidance of the danger.

One of your Committee has been fully convinced of the great danger attending the use of water through lead pipe. He has known lead to be taken from a portion of the liver of a person who died with every symptom of acute lead poisoning, and who was considered by the attending physicians to be a victim of lead disease.

The susceptibility of individuals to this poison varies very greatly; many persons apparently suffer no inconvenience, although subjected to precisely the same exposure which proves fatal to others.

One of the most striking cases of extreme susceptibility to this species of poisoning which has come to the knowledge of your Committee is the following:

A man aged thirty-five, who was a house-servant in the city, at the time of his sickness, had never been exposed to the influence of lead, as far as could be ascertained, previous to entering his place of service.

He was employed by a private family, consisting of persons both older and younger than himself, and who had drank the water through the lead pipe for several years, in fact, ever since the introduction of the water into the city, without the slightest apparent injury. The man referred to, was from the country, and perfectly healthy and strong, upon his arrival in the city; he was a fleshy and robust man, and never had noticed any indications of paralysis.

He had been in his situation as servant, exposed to lead poisoning in no other way than drinking the same water that the family used, only three months, before he was attacked with violent symptoms of lead paralysis, without the premonitory symptoms of colic.

He was *completely* paralized, excepting the muscles of respiration and the heart.

Even the muscles of the eye-lids were useless, and the "blue line" upon the gums was apparent, which is the well known and usual attendant upon cases of lead-poisoning.

Under treatment of iodide of potassium he completely recovered.

If such serious results *can* occur, is not the matter one worthy the attention of those who have in charge the public health.

The singular mode in which the lead is sometimes introduced into the system, also calls for care and watchfulness, to prevent the unknown and therefore unsuspected danger.

One of the members of your Committee was called upon by a physician who had a patient, a farmer, suffering apparently from lead poison, to make an analysis of some cider. From what source the lead was taken was a mystery. The water used by the family was all drawn by an old-fashioned "well sweep" and bucket; no possibility seemed to exist that lead *could* be the cause, and yet all the symptoms were those of a plainly marked case of lead-poisoning. The attending physician finally thought of the cider which the farmer was in the habit of drinking, and as a matter of extreme precaution decided to have a portion of it analyzed. From less than two quarts of that cider, metallic lead was obtained in substance sufficiently large to hold in the hand and prove its nature beyond question.

This caused an examination of the cask of cider and from the bottom of the cask, upon draining off the cider, was taken a pint bowl full of mixed sediment and white lead.

This, of course, readily accounted for the farmer's lead disease. The cask used had formerly been filled with oil, and in putting it together the edges of the staves had been plentifully coated with lead, ground in oil, before driving the hoops, to prevent the possibility of leakage, afterwards when used for cider, the lead was dissolved out and the serious consequences followed.

These instances, taken from many, are given to show that those who speak and feel warmly on this subject of lead-poisoning, do have some reason for their opinions and feelings.

We are aware that this is not strictly an adulteration, but certainly, after all that has been said and written upon this subject, those who, being aware of the facts in the case, and who could avert the danger, go on deliberately using lead pipes for drinking waters, place themselves in the situation of the man who sets spring guns, and gets shot himself. When lead pipes are used in preference because they are "cheaper" than gutta percha, block tin or iron, does not *this* constitute an adulteration of the water?

We are led to speak of this subject of lead water, perhaps going beyond the limits which the Association have laid down for our Committee, by having met with, and known many instances, where sad trouble has been produced by this often despised cause.

The next article we would ask your attention to is Milk:—

During the past year it has been the duty of one of your Committee to analyse a large number of specimens of milk. As many of you are aware, there exists a statute in some States regarding the sale of adulterated and unwholesome milk, and by virtue of that statute an Inspector of Milk is appointed by the authorities.

During the past year a large number of specimens have been analysed at the request of the Inspector of Milk for the city of Boston. With but one single exception, every specimen was found to be adulterated, many of them very largely.

The plan adopted has been to compare the amount of food contained in any milk examined, with that which, by the analysis of a very large number of specimens of pure cow's milk, was found to be the *average* amount. The amount of food being ascertained in any given specimen, it is easy, by comparison, to find the relative worth of the sample to the standard, and thus ascertain the dilution with water.

The amount of milk-sugar and salts was also estimated, and the difference between the weight of the Milk started with, and the sum of the weights of the food, milk-sugar and salts gave the weight of the water in any sample analysed. The amount of water which any milk contained, was not made the basis of comparison at all; the addition of water to milk decreases in a much larger degree the worth of the milk as a food yielding fluid, than it increases the *percentage* amount of water, and as the amount of *food* really constitutes the value of the milk, the analyses were placed on this alone.

Water is the principal adulteration of milk; but to conceal this fraud and destroy the "skim milk" appearance, recourse must be had to several other adulterations, as the addition of coloring matter, salt, etc., to increase the weight and improve the flavor, both which it does, the latter quite remarkably.

Sometimes poor milk, from cows that should not be milked at all, owing to their condition, is mixed with that sent to market. It is only by microscopical examination that this unwholesome and unclean milk can be detected. Specimens of this kind have been met with during the past year.

From the experience one of your Committee has had, he does not hesitate to say that the adulteration of milk is largely and systematically carried on. Who can judge of the amount of sickness caused to children by the use of this unwholesome and aftentimes poisonous food—poisonous, because decomposition has already commenced?

Much of the sickness among young children in many large cities may be fairly attributed to the bad and unhealthy milk which they almost of necessity receive; and to the poorer classes, those less able by other reasons to contend with such a diet, the greater portion of this milk is given.

The milk oftentimes is not served to consumers until the second day after it is taken from the cow, owing to its being transported long distances, and when diluted with water the process of decomposition is much more rapidly set up.

Tannin as Antidote to Strychnine.

By Prof. Kurzak, of Vienna.

From want of a reliable antidote, the treatment in cases of poisoning by strychnine hitherto consisted principally in endeavouring to evacuate the poison, to combat the frightful spasmodic symptoms by narcotics, and to re-establish respiration, when finally ceased, by artificial means. Donne proposed iodine, chlorine, and bromine as antidotes to strychnine; Garrod, Rand, Morson, and Falck recommended prepared animal charcoal; but the efficacy of these substances has been neither tested sufficiently by experiment nor proved by experience. The same is true in regard to tannin, and the astringent vegetables containing it, their infusions, decoctions, &c. Although they recommended themselves by the fact that tannin forms chemical compounds, insoluble in water, with strychnine and other poisonous alkaloids, it seemed very probable that these products might be redissolved in the stomach and intestines, and thus be rendered capable of absorption; the virtue of tannin as an antidote to strychnine was, therefore, considered very doubtful.

With a view to subject this matter to a thorough examination, and to ascertain the efficacy of tannin in preventing and allaying the symptoms of poisoning by strychnine, Professor Kurzak made a series of experiments on rabbits and dogs. At the end of his interesting and highly important memoir, he states that the results of his investigation permit him to draw the following conclusions:—

1. *Tannin*, if administered in time, is an excellent *chemical antidote to strychnine.*

2. The doubt, whether the precipitate formed by tannin in a solution of strychnine, although insoluble in water, would not be redissolved by the gastric and intestinal juice, and the strychnine thus reobtain its poisonous properties, is solved by these experiments on rabbits and dogs in a complete and highly gratifying manner.

3. The successful results in dogs and rabbits justify the expectation that *tannin would suspend the poisonous action of strychnine also in man*, even in cases where the evacuation of the tannate of strychnine, formed in the stomach could not be accomplished.

4. These experiments show that *twenty to twenty-five times the quantity of tannin is required in order to suspend the poisonous action of strychnine.* In cases of poisoning it will be, however, advisable to administer a relatively larger proportion, as a part of the antidote will be absorbed by the usual contents of the stomach, particularly by gelatine.

5. As tannin has proved to be an antidote to nitrate of strychnia, which is much more soluble in water, there is so much greater reason to hope that it will be successful in poisoning by pure strychnia which dissolves in water with great difficulty.

6. *The same successful result* is to be expected from its administration in poisoning by the hard and tough *nux vomica*, which imparts the poison to aqueous fluids, but gradually and not very rapidly.

7. Tannin is a so much more valuable antidote in poisoning by strychnine, as *galls* in which it is contained can be readily procured, and thus be administered without much loss of time, They are easily reduced to a powder, which is given mixed with water. Another advantage is obtained by the vomiting which it is liable to produce. In the mean time, an *infusion* or *decoction* of powdered galls may be prepared.

On an average, Turkish galls contain fifty, the Illyrian galls twenty per cent. of tannin. At least one drachm of the former and two drachms and a half of the latter are therefore required to neutralize one grain of strychnine introduced into the stomach, but in general, especially if there is vomiting, a much larger quantity should be administered.

8. Another readily obtained substance containing tannin is *Chinese tea*, the efficacy of which, in poisoning by strychnine, is confirmed by our experiments. But these experiments (VII. and VIII.) have also shown that, in a decoction of tea-leaves, we cannot count upon the whole amount of tannin contained in them. In poisoning by a larger dose, it would therefore be necessary to administer so large an amount of green tea that the antidote itself might produce poisonous effects. One decigramme (1.3 grain) of nitrate of strychnine requires, as our experiments prove, ten drachms (600 grains, 40 teaspoonfuls) of green tea, which, according to Peligot's analysis, contain about fifteen grains of caffein. Tea is therefore applicable only in poisoning by smaller doses, but may otherwise be useful as adjuvant.

9. The efficacy of *roasted coffee* as chemical antidote to strychnine seemed to be much inferior. The amount of *caffeo-tannic acid* contained in coffee is, according to Payen, 3.5 to 5.0 per cent. But our experiments (IX., X., XI.) show that the decoction evidently contains a much smaller quantity of undecomposed tannic acid than this per-centage would justify us in assuming. The decoction of 180 grains of roasted Cuba coffee (being adequate to 200 grains of the raw coffee, which should contain at least six grains of tannic acid) produced, according to the ninth experiment, merely a delay and diminuation of the poisonous effect of 0.13 grain of nitrate of strychnine. In the tenth and eleventh experiments, 300 grains of raw coffee, which weighed, after roasting, 267 and 264 grains, and should have contained at least nine grains of tannic acid, had furnished a decoction which, as antidote to 0.13 grain of strychnine, was nearly inert, only delaying the appearance of the symptoms for a little while.

10. From *unroasted coffee*, so inconsiderable an amount of tannin is extracted, by boiling, that the employment of its decoction for our purposes is out of the question.

11. *Oak bark* (of Quercus robur and Q. pedunculata) contains, according to Gerber, 8-5 per cent. of tannic acid, and imparts it readily to aqueous fluids. It deserves attention in poisoning by strychnine so much the more, as it can be procured without much delay, especially in the country. What has been said about the administration of galls equally applies to the use of the powder and decoction of this bark.

12. On account of their frequent occurrence and the large amount of tannin they contain, we have to mention in this connexion: *acorns* (from Quercus robur and Q. pedunculata) with 9 per cent., the *bark of the horse-chesnut* with 8 per cent., *willow bark* with 5¼ per cent., and *the green hull of walnuts*. The *radix tormentillæ* (with 17 per cent.), *rad. caryophyllatæ* (with 31 per cent.), and *rad. bistortæ*, are still rich in tannin, but can rarely be procured without much loss of time.

13. The solubility of precipitate produced by tannin in a solution of strychnine, by *acetic*, *citric*, and *tartaric acid* (vide experiments with the same), show the necessity of avoiding vegetable acids during the treatment of poisoning by strychnine with tannic acid.

14. The same applies to the internal use of *alcohol* and *alcoholic remedies.*

15. The reported experiments with rabbits have sufficiently proved that more active voluntary movements excite the spasms usually produced by strychnia, even when they otherwise would not have made their appearance. In treating cases of poisoning by strychnine, *it is therefore highly important to prohibit as much as possible all voluntary movements, and to avoid violent excitement of any other kind.—Zeitschrift der K. K. Gesellschaft der Aerzte zu Wien*, March 12, 1860.

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Camphor as an Antidote to Strychnine Poisoning.

In the *Pacific Medical and Surgical Journal*, for June, Dr. M. T. Dodge reports a case of poisoning with strychnine, entirely relieved by the administration of camphor. According to the report, *five grains* of strychnine had been taken *three hours previously.* Ten grains of camphor were given in emulsion, and repeated every half hour or hour for seven hours, when the spasms entirely ceased, and the patient rapidly recovered. It would certainly be a fortunate discovery should camphor be found to be a reliable antidote to the poisonous action of strychnine. The case reported lacks at least two essential points to make it available as proof upon this point. It is thought by many that much of the strychnine in use is nearly inert, and, if taken as claimed, there is no proof that the article was genuine. More than this, there is no proof, but the patient's statement, that the five grains of strychnine had been taken at all. There is certainly one suspicious fact in the case, that must in some measure detract from our confidence in the antidotal power of camphor. *Three hours* had elapsed from the taking of the poison before remedial aid was had, and yet the patient was sitting up, and presented no very alarming symptoms. Prof. Wood says that, in cases of poisoning from strychnine, the alarming symptoms usually follow the administration in from ten minutes to half an hour. One of two things is evident: the five grains were not all taken, or the poison was not of standard strength; either would effect the result, so far as relates to the antidotal powers of camphor.

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TREATMENT OF LEUCORRHŒA.—In leucorrhœa from chronic stasis of the uterus, without considerable textural changes, and in the absence of syphilis, Dr. Pockels has for a long time past administered with great success secale cornutum and catechu, giving of each as much as will lie on the point of a knife three times a-day—the catechu being as serviceable as the more expensive tannic acid. If there is anæmia, phosphate of iron is added, and alkalies, when acidity of the stomach prevails. An increased secretion of the mucus is at first produced, and this may have some blood mixed with it, when chronic hyperæmia is present.—*Varge's Zeitschrift*, band xiv. p. 7.

THE PHARMACEUTICAL ASSOCIATION.

THURSDAY MORNING SESSION.

THIRD DAY.

The time fixed yesterday for discussing the subject of the next place of meeting having arrived, a motion was made by William J. M. Gordon that the next meeting be held in Cincinnati.

A letter from the St. Louis Pharmaceutical Association, signed by its officers, was read, inviting the Association to hold its next meeting in St. Louis.

After considerable expression of sentiment, the motion of Mr. Gordon was amended by the substitution of the words "St. Louis" for "Cincinnati," and was carried unanimously in the following resolution:

Resolved, That the next annual meeting of the American Pharmaceutical Association, shall be held in the city of St. Louis, at 3 o'clock, on the fourth Wednesday in August, 1861.

Frederick Stearns offered the following:

Resolved, That a committee of nine members be appointed to correspond with the leading pharmaceutists of the western cities, inviting their attendance at the next annual meeting in St. Louis, and if possible to organize excursion parties to start from the Atlantic cities for that purpose.

Which was adopted.

On motion, it was resolved that when we adjourn, we adjourn to meet this afternnoon at half-past three o'clock,

The reading of scientific papers was again resumed.

Query 37. On the essential oil of Sassafras, not having been answered, was continued to A. P. Sharp for another year.

Query 38. On Pink Root and Senega, was continued to L. F. Dohme for another year.

Query 39. On the American species of Cantharis. A letter was read from S. Chapman Hill, to whom this query was referred, giving satisfactory reasons for not having replied to it, and asking for its continuance to him for another year, which was granted.

Queries 40 and 41 received no reply, and were passed by.

Query 43. Dr. Squibb to whom this query was referred, made a verbal reply, based on his experience, but had not been able to produce a figure of apparatus that he felt satisfied to offer to the Association.

Query 44. In regard to the best form for a pharmaceutical still for the apothecary, &c., was continued to Dr. Squibb for another year.

Query 29. On Lupuline and Hops, was now read by Charles A. Tufts, and referred for publication.

The Executive Committee now reported the following names as candidates for membership, viz:

Giles D. Simms, of Washington, D. C.
George Buck, of Chicago, Illinois.

Abram Alberger, Jr., Philadelphia.

George W. Mowbray, New York city, New York.

A ballot was ordered, and the gentlemen were all declared to be elected.

Query 27. On the depreciation of Smyrna Opium, was answered by P. Wendover Bedford. Interesting comments were made on this subject by Dr. Squibb, Edward Parrish and others.

Query 42. On Theobroma Cacao, was answered in a lengthy paper by Dr. Donnelly, describing the history, botany, culture and manufactured products of Cacao, a portion of which he read.

On motion, the paper was accepted by the Association, and referred to the Executive Committee.

The following additional members signed the register, either during this or the subsequent sittings, and are all presented together for convenience:

Lester S. Hubbard, Brooklyn, N. Y.
C. Shivers, Phila., Pa.
G. W. De la Vergne, N. York City.
Frederick Stearns, Detroit, Mich.
E. Donnelly, Phila., Pa.
Matthew F. Ash, Jackson, Miss.
Charles A. Heinitsh, Lancaster, Pa.
Evan T. Ellis, Phila., Pa.
Wm. M. Somerville, New York City.
F. V. Heydenreitch, Brooklyn, N. Y.
Henry Q. Mack, New York City.
J. Lindley Pyle, Brooklyn, N. Y.
William Ball, New York City.
George M. Mowbray, "
Augustine Presenger, "
Geo. W. Southwick, "
Richard Forester, Brooklyn, N. Y.
Peter D. Leys, " "
George C. Leys, " "
Wm. H. Page, " "
Otto Lais, Jr., New York City.
Th. Schumann, "
Gustavus Ramsperger, New York City.

On motion, adjourned.

THURSDAY AFTERNOON SESSION.

The meeting was called to order by President Kiersted.

Query 34. On the best method of keeping camphor in the form of powder, was answered by a paper from Henry D. Fish, who presented a form of the powdered camphor.

The President announced the following gentlemen as constituting the Committee of nine, called for by the resolution of Frederick Stearns, in relation to obtaining a larger attendance at our next annual meeting:

S. M. Colcord, Boston.
Edward Parrish, Philadelphia.
E. O. Gale, Chicago.
Geo. W. Weyman, Pittsburgh.
John Meakim, New York.
F. Stearns, Detroit.
Wm. J. M. Gordon, Cincinnati.
John Thompson, Sumter, S. C.
W. H. Peabody, Buffalo, N. Y.

Query 35. On the Guarana of Brazil. Henry F. Fish reported that he had not been able to obtain guarana in time and in sufficient quantity to prepare his essay, and asked to read an essay on "Coca" instead, as an analogous subject. This being approved, he read the paper, which was referred to the Executive Committee.

Volunteer papers were now called up by the Business Committee.

Dr. Wilson H. Pile, of Philadelphia, read a paper on the Dicas Liverpool hydrometer, an instrument for ascertaining the proof of alcohol, and exhibited one of the instruments to the meeting. The paper was referred to the Executive Committee.

John Faber, of New York, read an interesting paper on "Manufacturing Pharmacy," as it might be developed in the apothecary's store. The views given in the essay were advocated by Dr. Squibb and Edward Parrish. Dr. Squibb also remarked on the tendency that selling manufacturers' galenical preparations had to reduce the profession of pharmacy to mere shopkeeping trade. Mr. Stearns also advocated these views.

The Committee appointed to audit the Treasurer's account, reported that they had discharged their duty, and find that the balance of cash to be passed to debit of Treasurer's account, for the current year, amounts to eighty-one dollars and thirty-nine cents.

Edward Parrish presented a living specimen of the Benne plant, from the garden of F. Brown, at Burlington, N. J., illustrative of a paper on the culture of Benne as an agricultural product for its seed and oil. He also exhibited and explained a new gas furnace, peculiarly adapted to evaporation, and, by an additional contrivance, to processes requiring high temperature.

It was moved and carried, that when we adjourn it shall be till to-morrow morning at 9½ o'clock.

The Executive Committee having recommended the name of Wm. H. Page, of Brooklyn, N. Y., as a candidate for membership, a ballot was ordered, and his election was reported by the tellers.

William Proctor, Jr., Chairman of the Committee on Subjects for Investigation the ensuing year, reported a list of queries, with the names of gentlemen accepting them, which was read, and the report left open for further additions, when the Committee should report finally.

On motion, the subject continued last year to Henry A. Tilden, on the comparative value of foreign and indigenous narcotic plants, was, in compliance with the request of that gentleman in a letter to the Association, continued to him another year.

Frederick Stearns offered the following:

Resolved, That this Association will not accept any report or scientific paper, written by a member or contributed by one not a member, which has been previously printed and distributed.

Which was adopted.

The Business Committee reported the possession of a paper received from John L. Kidwell, of Georgetown, D. C., being a list of medicinal and useful Plants procured by the Agricultural division of the Patent Office."

On motion, the paper was read, accepted and referred to the Executive Committee.

John M. Maisch then read a paper on Narcotic Fluid Extracts, which, on motion, was accepted, and referred to the Executive Committee. The paper was accompanied by specimens of the fluid extracts of Belladonna and Hyoscyamus by the process it recommended.

The same gentleman read a paper on Hydrobromic Acid, which was accepted and referred as usual.

On motion of Dr. Squibb, the following "Committee on Home Adulterations" was appointed by the Chair, viz:

Charles T. Carney, Boston, Chairman.
John D· Dix, New York. Joseph Laidley, Richmond.
William Proctor, Jr., Philadelphia. Charles A. Junghanns, Cincinnati.
George W. Andrews, Baltimore.

After some discussion on the propriety of offering prizes for papers to be read next year, on motion, adjourned to 9¼ o'clock, to-morrow morning.

FRIDAY MORNING SESSION.

FOURTH DAY.

The meeting was called to order by President H. T. Kiersted. The minutes of last session were read, corrected and adopted.

The Executive Committee offered the names of the following gentlemen as candidates for membership:

Alexander Blake, New York City. J. Weaver, New York City.

A ballot was ordered; John Meakim and Evan T. Ellis, acting as tellers, reported their election.

Dr. Squibb, of the Business Committee, called for the reading of the biographical paper on Sir Henry Cavendish, which was proceeded with by the author, Henry F. Fish. It spoke of the parentage and education of the distinguished chemist and discoverer, and gave anecdotes of his eccentricities, etc.

On motion, the paper was accepted by the Association and referred to the Executive Committee.

Dr. Squibb, from the Business Committee, offered the following preamble and resolution:

WHEREAS, The subject of legal restraint for curtailing the sale of poisons is at present much agitated in some States of the Union, and appears to be attracting universal attention: *And Whereas*, This Association has always regarded this important subject as one of the reformations most desirable between pharmaceutists and the public: *And Whereas*, Several bills have been enacted and proposed for the purpose of effecting the desired object, neither of which entirely meets the approval of this body: therefore,

Resolved, That the judgment of this Association be now had upon the subject, and that thereon a committee of three be appointed to mature a plan by which the objects may appear to be best attainable,—that committee to report at the next session of the Association.

Dr. C. B. Guthrie made an eloquent address on the subject of the resolution, alluding to the difficulty of deciding who were responsible physicians, to the odium unjustly resting upon the apothecary, when cases of poisoning occur, and the necessity of deciding who are and who are not genuine apothecaries.

Isaac Coddington said that the law restricting the sale of small quantities of poison, by rendering the purchase of larger quantities easier, would prove more dangerous by causing persons to buy the larger amount overlooked by the law, and lay aside the unused portion where it might be mistaken for culinary articles.

Dr. Squibb deprecated the enumerating of poisons, in the laws restraining thereof, which are not used for murderous puproses, such as cyanide of potassium, cannabis indica, cantharides, essential oils, &c. He also referred to absence of laws protecting the public from incapable practitioners of medicine and pharmacy, and of those protecting such as are capable. The framers of the laws in attempting to cover too much ground have failed to cover the chief point of difficulty.

Dr. Percy of New York, was introduced to the Association by Dr. Squibb, and was, on motion, invited to address the Association He spoke of having aided in drawing up the bill submitted to the New York Legislature, which was quite different from that now the law, only two sections of the former having been passed, yet he considered so far as requiring a registration of sales it would prove useful. The original bill required that every person who sold poisons should be licensed to do so,—the fee to be fixed upon at a nominal price. This would make every authorized seller of poisons known to the officers of the law, and thus facilitate the detection of the guilty. The object of the law was not for preventing suicide, but to detect the murderer and abortionist; and, in so far as it did this, it would prove useful.

Edward Parrish expressed himself as favorable to such regulating laws, but too many substances had been restricted. He referred to the decision of the Pharmaceutical Society, that the only safeguard was in the character of pharmaceutists and those selling poisonous substances. Apothecaries, in his opinion, saved thousands of lives by their vigilance, and were often blamed undeservedly.

Dr. Guthrie remarked, that if you start with protection to the apothecary, you make it an incentive to young men to properly qualify themselves and take a regular collegiate course, and not be levelled with grocers and dry goods dealers, as mere traders; and that such protective laws are the kind wanted.

Dr. Gardiner, of New York, being introduced, thought it injurious to have laws which cannot be carried out; the New York law he considered to be in that category; that conscientious men in the business were the best safeguard. Any man may set up for a doctor and obtain articles for criminal purposes, and the present registry law can be easily evaded and is futile. He also recommended the idea that physicians should be careful to send their prescriptions to qualified apothecaries.

Charles A. Junghanns, of Cincinnati, was in favor of the Association making the best draft of a law for the purpose that can be effected as a primary step.

W. J. M. Gordon stated that the Ohio law required arsenic to be colored before being sold.

Dr. Bachelder, of New York, thought that the present New York law was somewhat beneficial, but was easily evaded.

John Meakim believed the difficulty layd at our own doors; we were too unwilling to act vigorously in the matter.

Charles T. Carney believed the law should restrict the sale of very few poisons, and that *some* State law would be acceptable to most pharmaceutists. He had entirely declined the sale of some leading poisons in his own store.

Frederick Stearns considered that no law could be framed of any practical results, and that in such laws, if passed, poisons should not be specified, but generalized.

W. J. M. Gordon was opposed to the views of F. Stearns in regard to generalizing the expression of the law, which he believed should specify the most usual poisons.

W. Proctor, Jr., remarked that the laws usually passed to regulate the sale of poisons were more for the protection of the public than for the relief of the apothecary; that the Pennsylvania law does not limit the sale of poisons, but compels the registration of five kinds, viz: arsenic, strychnine, morphia, corrosive sublimate and prussic acid when sold by retail; that this law could and should be carried out by regular apothecaries, and would thus far prove useful in tracing purchases with evil designs.

Dr. Percy agreed with Prof. Proctor, that the use of the law was chiefly in affording the means to discover who had bought and sold poisons, and thus aid the cause of justice.

The question on the preamble and resolution of Dr. Squibb being called for, a vote was taken, and they were adopted.

Edward Parrish offered the following:

Resolved, That the Executive Committee be directed to forward copies of the Proceedings, including those of previous years, as far as practicable, to the various pharmaceutical and chemical societies and colleges in this country and Europe, with the request for exchanges.

It was moved to amend the resolution by including the editors of the leading newspapers, which on being put to vote was lost.

The resolution was then voted for, and was adpoted,

William J. M. Gordon, of Cincinnati, offered the following:

Resolved, That this Association tender their heartfelt thanks to the New York College of Pharmacy, and to the druggists and pharmaceutists of New York, who have contributed to the comfort and entertainment of its members during the present sessions.

Which was unanimously adopted.

Dr. Squibb, on behalf of the Business Committee having informed the Association of the remaining business claiming attention, considerable discussion ensued on the propriety of now entering upon the subject of weights and measures; which, on motion, was taken up.

The following preamble and resolution offered by the Business Committee were read, viz:

WHEREAS, It is the judgment of this Association that a change in the official tables of weights and measures is desirable and expedient; *And whereas*, it is understood that the final Committee of Revision and Publication of the U. S. Pharmacopœia have as yet come to no action upon this subject; therefore, 1 *Resolved*, That it is expedient and proper for this Association, at this time, to offer its judgment upon this important subject.

2 *Resolved*, That the change of weights recently adopted in the Committee of the Council for consolidation and revision of the British Pharmacopœia, by which change the table of avoirdupois weight is adopted, with a new division of the avoirdupois ounce into 480 parts to be called grains, meets the approval of this Association, and is recommended for adoption in the National Pharmacopœia.

The vote being taken on the preamble it was adopted.

The first resolution was also adopted.

The second resolution was read again, and its tendencies explained by Dr. Squibb, and views were expressed by various members on the subject. After a great deal of discussion, in which the majority were opposed to the resolution, the motion to adjourn till 3½ o'clock prevailed.

AFTERNOON SESSION.

The meeting was called to order by the President.

The Chairman of the Committee on Questions for Investigation, &c., read the conclusion of the report, which was now on motion adopted in full, and is as follows:

The Committee appointed to prepare a list of subjects for next year, report the following, viz:

1. Is mercury volatizable by heat without losing its narcotic properties? If not, how are the narcotic effects of opium smoking accounted for?
Accepted by William Proctor, Jr., of Philadelphia.

2. Cerate made with Japanese wax is said to acquire a dark color. Is this change a necessary consequence of the use of that wax? and what is the real value of that substance in Pharmacy?
Accepted by Thomas A. Lancaster, of Philadelphia.

3. To what extent can oil of benne (ol. sesami) be substituted for olive oil in Pharmacy? *Accepted by James T. Shinn, of Philadelphia.*

4. What are the probabilities in favor of tartaric acid and tartar becoming commercial products of the wine culture of the Ohio valley?
Accepted by W. J. M. Gordon, of Cincinnati.

5. Can the root of Aconitum napellus be economically produced in the United States, and does it possess the activity of the imported drug derived from that plant? *Referred to Henry A. Tilden, of New Lebanon, N. Y.*

6. Arsenical pigments;—are they as extensively employed, and with such poisonous effects as has been asserted?
Accepted by Benjamin J. Crew, of Philadelphia.

7. Is there a permanent solvent for cantharadin that will retain it in a liquid state in pharmaceutical preparations?
Accepted by Wm. R. Warner, of Philadelphia.

8. Garancin. What is the best process for obtaining it, and the best method of testing its purity as found in commerce?
Accepted by Benjamin J. Crew, of Philadelphia.

9. Is there a principle in Chenopodium anthelminticum analogous to santonin? *Accepted by James Balmer, of Baltimore.*

10. Is there a crystalline active principle in capsicum? or does it owe its activity to soft resin? *Accepted by Frederick L. John, of Philadelphia.*

11. What are the advantages, if any, of Conium seeds for making the Tincture of Conii, as regards uniformity of medicinal strength, and increased power, compared with the leaves? *Accepted by Henry F. Fish, Waterbury, Conn.*

12. Has the resinoid principle of colocynth,.extracted by alcohol, a reliable and constant therapeutic power? and may it advantageously be employed in medicine? *Accepted by John Faber, of New York city.*

13. The oil wells of Western Pennsylvania—the quantity and quality of oil they afford at present, their prospective value, and the geological character of the formation where the oil is deposited?

Accepted by George W. Weyman, of Pittsburg.

14. Does wood creosote exist in the market? to what extent compared with coal tar creosote or carbolic acid? and what are the objections, if any, to the substitution of the former by the latter substance in medicine?

Accepted by Charles Bullock, of Philadelphia.

15. Cotton seed oil, the expressed oil obtained from the seeds of Gossypium herbaceum, being easily obtained, and at a low rate:—Are there any therapeutic objections to its being substituted for olive oil, in pharmaceutical preparations? *Accepted by Wm. J. Watson, of New York city.*

16. Is propylamin the principle in Ergot that influences uterine contraction; and if so has the propylamin of commerce derived from herring pickle, a like power? *Accepted by E. Donnelly, M. D., of Philadelphia.*

17. Is there a test for the therapeutic value of extract of Cannabis Indica, based on the chemical behavior of its resin, that may be relied upon to distinguish the active from the inert drug?

Accepted by Wm. Proctor, Jr., of Philadelphia.

18. It has been alleged that commercial honey is sometimes largely adulterated with artificial grape sugar syrup, and ordinary syrup. Is this true—where, and to what extent is it carried on, and how may the adulteration be detected? *Accepted by Frederick L. John, of Philadelphia.*

19. What is the most eligible manner of dispensing Phosphorus, for internal use? *Accepted by John Faber, of New York city.*

20. Is the sedative action of Veratrum viride due to the veratria known to exist in it, or is there another principle contained in it to which that power is due? *Accepted by George J. Scattergood, of Philadelphia.*

21. Copaiba. What are the botanical sources of this drug as at present furnished to commerce? and what is its present commercial history?

Referred to Prof. Joseph Carson, of Philadelphia.

22. What is the actual condition of the cod liver oil production and trade, in the United States? *Accepted by E. M. Blatchford, of Rockport, Mass.*

23. Is the present wholesale production of sugar-coated pills advantageous to the interests of medicine? If not, what are the objections to it? What are the best processes for coating pills with sugar, gelatin and other substances, for extemporaneous use, by the dispenser of prescriptions?

Accepted by Frederick Stearns, of Detroit, Mich.

24. Does the root of Convolvulus panduratus contain a glusosidic resin analogous to Jalapin, and has it cathartic properties?

Accepted by L. M. Lemberger, of Lebanon, Pa.

25. What is the value of Chelidonium majus as a source for sanguinaria, compared with Sanguinaria canadensis?

Accepted by P. Wendover Bedford, of New York city.

26. What is the tonic value of the indigenous astringents of the United States, for medicinal and other purposes?

Accepted by Wm. R. Warner, of Philadelphia.

27. Can Phospho-molybdic acid, as a reagent for alkaloids, be made available as a test for the strength of narcotic extracts?
Accepted by Ferdinand F. Mayer. of New York city.

28. What are the statistics of the trade in castor oil, as regards locality and amount of production of the beans, and the preparation of the oil?
Accepted by Frederick F. Mayer, of New York city.

29. To what proximate principle does the marc of castor oil beans owe its activity as a purgative? *Accepted by Wm. R. Warner.*

30. What is the true botanical source of "Southern prickly ash bark?"
Referred to Dr. Robert P. Thomas, of Philadelphia.

31. The subject of New remedies, with reference to their effect upon the progress of pharmacy, and their educational influences upon pharmaceutists.
Accepted by Edward Parrish, of Philadelphia.

32. Anilin dyes—the history of the discovery and production of these coloring agents, and their probable influence on the decorative arts.
Accepted by George W. Weyman, of Pittsburg, Pa.

33. An essay on tartaric acid, and the medicinal tartrates, in their chemical and pharmaceutical relations. *Accepted by John M. Maisch, Philada.*

34. Is the tomato available as a source of citric acid for the supply of commerce, and has the seed of this fruit any medicinal power?
Accepted by Thomas A. Lancaster, of Philadelphia.

35. Are the "Spirits" of the Pharmacopœia better when made by distillation, than the preparations made by dissolving the respective volatile oils in alcohol? *Accepted by Thomas Wiegand, of Philadelphia.*

36. What course should be adopted by pharmaceutists in view of the present state of the liquor market, particularly as regards fictitious brandies and wines? *Accepted by Henry F. Fish, of Waterbury, Conn.*

37. An essay on the commerce in Quackery, in the United States, and its influence on the practice and progress of pharmacy.
Accepted by Thomas S. Wiegand, of Philadelphia.

38. The leaves of the castor oil plant (Ricinus communis,) and their reported property of promoting the secretion of milk.
Accepted by Alexander Cushman, of New York city

39. What is the botanical source and commercial history of the "anacahuito wood" of Mexico, said to be used in Germany for diseases of the lungs?
Referred to Charles Caspari, of Baltimore, Md.

40. What are the sources of the senega and spigelia of present commerce?
Continued to L. H. Dohme, of Baltimore, Md.

41. Can Elaterium be produced in the United States, and if so, is the indigenous product equal in power to the English drug? (for 1861 and 1862.)
Referred to Prof. Robert P. Thomas, of Philadelphia, Pa.

42. What is the smallest outfit of a retail pharmaceutist with reference to the preparation of those chemical and pharmaceutical products which are economically made on a small scale?
Accepted by Edward Parrish, of Philadelphia.

44. What are the best arrangements, and precautions to be obserevd in the preparation of soap for pharmaceutical uses?
Accepted by Charles Shivers, of Philadelphia.

45. What is the active principle of arnica flowers; aud what the best process for isolating it? *Continued to Dr. Henry T. Cummings, Portland, Me.*

46. The American species of the genus cantharis as regards their usefulness

in medicine as vesicants, their existing quantity in view of the supply of commerce, and other information regarding them?

Continued by request, to T. Chapman Hill, of Antioch, Ohio.

47. What is the best form and material for a still for the pharmaceutist's use of from two to four gallons capacity, appropriate for heating by gas or stove heat, which shall combine economy with efficiency and fitness?

Continued to Dr. E. R. Squibb, of Brooklyn, New York.

48. An inquiry relative to the comparative value of the several arrow-roots of commerce, which are derived from the Maranta arundinacea, &c., the query of last year. *Continued to Evan T. Ellis, of Philadelphia*

49. European Pharmacy,—what are the chief differences and points of resemblance between it, and our own?

Continued to Robert Battey, M. D., of Rome, Georgia.

50. What are the principal sources of oil of sassafras for the supply of commerce, and what is its mode of manufacture and the quantity produced annually? *Continued to Alphœus P. Sharp, of Baltimore, Md.*

The Committee desire to receive authority to add to this list such of the unanswered questions of 1860 and others, as they may deem most likely to receive attention from the gentlemen to whom they may be entrusted.

William Procter, Jr., *Chairman*,
Thomas S. Wiegand,
Edward R. Squibb,
Charles A. Tufts,
Frederick L. John,
New York, Sept. 14, 1860. *Committee.*

After some informal discussion on the subject of offering prizes for scientific papers, on motion it was laid over to come up with the unfinished business next year.

Query No. 30. On "Patents in their relation to Pharmacy and Medicine," by Edward Parrish, was now read, (it having been mislaid when called for in the proper order,) and was referred to the Executive Committee.

The President announced the following gentlemen as the committee of three called for by the resolution in relation to the sale of Poisons:

Samuel M. Colcord, of Boston.
William Proctor, Jr., of Philadelphia.
William J. M. Gordon, of Cincinnati.

The subject of weights and measures being now called up, the second resolution was read again, the discussion continued, and on a vote being taken it was not adopted, the general expression being against it.

Dr. Squibb offered the following as a substitute for that resolution, viz:

Resolved, That in the judgment of this Association it is expedient and practicable in the officinal formulas of the Pharmacopœia to abolish the use of measures of capacity, and to substitute for absolute weights and measures the term *parts*, meaning *parts by weight;* and that this Association recommends such a change as the most simple, practicable, and effective one that can be at present made.

After considerable discussion this resolution was adopted. [It is proper to state that the number present when these resolutions were lost and passed was much smaller than the average attendance at the other sittings, and it is to be regretted that a subject of such general interest should have been left till the last sitting for its decision.—ED.]

The Business Committee brought forward the following:—"Whereas, this Association recognizes the justice and propriety of the recent movements in some localities, in regard to restricting the Sunday business of pharmaceutists to certain definite hours, for very obvious good reasons, therefore

Resolved, That this Association heartily recommends the adoption of definite hours for the transaction of the necessary Sunday business; such hours to be determined by the co-operation of the public, the Medical and the Pharmaceutical interests of the various localities, when these interests may combine to adopt the recommendation.

Which was adopted.

The Business Committee reporting that there was no more business to be brought forward, it was on motion resolved that that committee be continued to bring deferred business before the Association next year.

John M. Maisch offered the following:

Resolved, That the thanks of the Association are due to the President, the first Vice-President and the Secretary, for the efficient performance of their duty.

The minutes were then read and approved, when the Association adjourned to meet in St. Louis on the fourth Wednesday in August, 1861, at 3 o'clock, P. M.

JAMES T. SHINN, Secretary.

Selections.

DIGITALIS IN DELIRIUM TREMENS.—A few weeks ago, we mentioned in our periscopic department, the treatment of delirium tremens by large doses of tincture of digitalis. In the October 13th number of the *Med. Times and Gaz.*, Dr. Ballard corrborates the statements of Mr. Jones as to the efficacy of this treatment, and gives several additional cases. "My own impression," he says, "from what I have seen and heard from Mr. Jones is, that, in tincture of digitalis, we have a true *counter-poison*—an addition to that class of mutual antidotal poisons of which opium and belladonna have been the most recent example. Alcohol is the remedy by which we counteract the depression produced by digitalis; the converse is also true; digitalis is most remarkably an antidote for alcoholism."

The article recently copied from an English journal on the administration of very large doses of the tincture of digitalis in delirium tremens has attracted much attention. The English officinal tincture is of the same strength as that of the U. S. Pharmacopæia. A practitioner of this city has informed us that he has frequently prescribed the tincture in drachm doses during acute inflamations, but the use of the article in half-ounce doses in conditions in which the arterial sedative effect is not apparently indicated seems extremely hazardous. Yet it is claimed that the effects of digitalis in inflammatory affections and in delirium tremens are exactly contrary. In inflammatory disease it subdues and regulates the pulse, whilst in delirium the pulse by it is increased in force and fullness.

EXPULSIVE GINGIVITIS.—The Paris correspondent of the *Lancet*, says:—In a recent communication to the Academy of Medicine, M. Marchal de Calvi dwelt upon a not uncommon disease of the gums and alveola. This disease, hitherto unnamed, he proposes to call "expulsive gingivitis," and as a suggestion of treatment, based upon a series of successful cases, is appended to the essay, I deem it worth mentioning. The affection consists in an inflammation of the gum and of the tooth-socket or its lining, mostly commencing by an abscess, with a subsequent slow inflammatory process. The tooth begins to emerge from its position in the jaw, deviating from the natural direction; the gum recedes, and if the malady be unchecked, the former is completely ejected from its legitimate lodging. The disease is mentioned by English authors, but seems to be, if not unknown, at all events *unnamed* in France, and constitutes the torment and bugbear of many a coquettish middle-aged lady. M. Marchal de Calvi enumerates as the causes of this unsightly affection,—first, hereditary predisposition; next, exposure to damp and cold, the neglect of cleanliness, and presence of tartar round the gum, dyspepsia or gastric irritation; and lastly, pregnancy and lactation. The remedy found most successful in cutting short the disease in its early stage is, a *watery* solution of iodine to be brushed twice daily over the gum: the solution at first to be used weak, and subsequently stronger, until a concentrated form is tolerated.

VERATRUM VIRIDE IN PUERPERAL MANIA.—A highly interesting instance of the sedative action of *veratrum viride* was given by Dr. John L. Atlee, Jr., at a session of the Lancaster (Pa.) Medical Society. In order to diminish the nervous excitement, and control the general circulation in a patient showing all the symptoms of puerperal mania, Dr. A. ordered the saturated tincture of *veratrum viride*, in doses of five drops every three hours, which, after three doses, produced subsidence of most of the symptoms, which disappeared completely when the medicine had been continued for four days, at intervals of four and lastly of six hours, followed by perfect re-convalescence.

QUININE AND ABORTION.—Edward Warren, M. D., Editor of *The Medical Journal of North Carolina*, in the May issue of that journal, commenting upon an article from the *Med. Monthly*, says: "We have found nothing more likely to produce abortion in pregnancy than the administration of large doses of quinine."

IRON IN ERYSIPELAS.—D. Ch. H. Hughes, of Warrenton, Mo., (St. Louis *Med. and Surg. Journal*, Sept. 1860,) relates some remarkably violent cases of erysipelas, which were cured principally by the internal administration of the muriated tincture of iron in doses as large as a drachm.

The Retirement of M. Ricord.—M. Ricord has retired from his post as surgeon of the Hospital du Midi. The hospital regulation which requires the retirement of medical officers at the age of sixty, would soon have completed his term of service, but he has chosen a more dignified leave by resignation. Ricord was born in Baltimore on the 10th of December, 1800, and has held his position in the hospital for nearly thirty years. His opportunities have been unequalled, and his great reputation has been the result of immense labor and observation on the speciality which is so much indebted to him for its development.

Ricord's place, it is said, is to be filled by one whose name is not unknown to syphilography—M. Alphonse Guerin.—*Medical aud Surgical Reporter.*

Singular Case of Loss of Hair.—In the *Boston Medical and Surgical Journal* for June 14, Dr. H. O. Jewett reports the case of a boy "that when an infant had hair like other children, but when four or five years of age, and while in perfect health, it began to fall off, and in a few weeks left him completely hairless." Eyebrows, eyelashes, as well as every hair upon the head, came out; and five years later, at the time of the report, there was not the least evidence of any natural effort at reproduction.

Veratrum Viride in Pneumonia.—In the *Nashville Journal of Medicine and Surgery* for June, Dr. A. A. Davidson has an article upon the use of veratrum viride in pneumonia. This is not a new treatment, but his experience and confidence are such as to justify their repetition. He says, "I have followed no other particular treatment for the last two years in pneumonia and pleurisy than the medicine in question, and I am happy to say I have never seen a case terminate unfavorably under the treatment." In conclusion, he says, "I look upon the veratrum as being worth all the other treatments combined for pleurisy, pneumonia and all other diseases of an inflammatory nature, when carefully and judiciously administered. I speak this candidly, because it it is my own experience that prompts me to do so."

Ascarides.—The origin of entozoa, and among them of the ascaris vermicularis, is still doubtful; but it may fairly be supposed that the entozoa found in the alimentary canal are introduced from without. During the last eleven years I have been in the habit of using diluted phosphoric acid, with infusion of quassia, in cases of ascarides, at the Bath United Hospital, and in private practice, and have as yet no reason to mistrust its efficacy.

R. Wilbraham Falconer, M. D.

Sedative Pills.—The following is the formula of the most efficacious of pills in the sleeplessness of hypochondriacs and hysterical persons, and indeed of all persons suffering from nervous affections:—Assafœtida one dram, sulphate of morphia three grains, into thirty pills, one or two at bed-time. From two to four of these pills daily are of great use in relieving the dry cough to which nervous women with irregular menstruation are liable.—*Moniteur*, 97.

Neuralgia.—In the *Chicago Medical Examiner* for June, Dr. L. D. Robinson has an article upon neuralgia, in which his views of its pathology are given, and also his plan of treatment. We subjoin only the treatment. In a case reported, the treatment advised, which, he says, was that usually advised by him, was the following:

" R.—Chinoidine,	24 grs.
Pulv. Capsicum,	5 grs.
Strychnia,	1 gr.

M.—fiat. pil. No. 10. Dose—a pill before each meal.

After using the above sufficiently long to break down the paroxysm, and give the patient relief, we prescribe the following:

Quevenne's iron,	60 grs.
Quinine,	60 grs.
Ext. Hyosciami,	40 grs.
Pulvis Capsici,	20 grs.

Divide into 40 pills. Dose—a pill after each meal, and to be continued until completely relieved of debility."

Cannabis Indica as a Hypnotic.—Dr. Fronmuller, after a large number of experiments, draws the following resumé of the value of this drug.

Of all anæsthetics ever proposed, Indian hemp is the one which produces a narcotism most closely resembling the natural sleep without causing any extraordinary excitement of the vessels, or any particular suspension of secretions, or without fear of a dangerous reaction, and consecutive paralysis. It acts neither as violently nor as surely as opium. It can be given in all acute inflammatory diseases as well as typhoid affections. It is well adapted as an alternate with opium in case this ceases to act. Its best mode of administration consists in pills of the alcoholic extract and powdered seed. The smallest dose susceptible of producing sleep is eight grains in pills of one grain. This dose, however, must be rapidly augmented. The action on the skin, the kidneys and sexual organs, attributed to Indian hemp is without any practical importance.—*Prager Vierteljahrschrift*, 1860.

Expeditious Method of Causing Cessation of the Lacteal Secretion.—The most simple method, says H. M. Van Holsbeck, which I have followed for the last three or four years, and which I have never known to fail, and have found described nowhere, is the following: Introduce into the tip of a goose feather, prepared as for camphor cigarettes, a quantity of metallic mercury sufficient to fill it exactly, and fill up the ends with sealing wax. The patient suspends this little instrument in front of the sternum. In less than twenty-four hours the lacteal secretion will have entirely ceased, and two days after the breasts will have assumed their normal state.—*L'Abeille Médicale.*

A Simple Substitute for Lallemand's Instrument. — Dr. Porcher, of Charleston, introduces an ordinary catheter as far as the mouths of the seminal vesicles, and then pours into the extremity of the instrument a solution of the nitrate of silver.

A New Suggestion for the Relief of Strangulated Hernia is made by Dr. S. Oliver in the *Lancet.* The abdominal muscles are to be relaxed by elevating the patient's chest and thighs while he lies on his back. The taxis is now resorted to while the assistant sinks his hands into the hypogastric region of the abdomen, and moves them upward towards the ribs.

Poison Oak.—D. C. A. Canfield, in a letter to the *Pacific Sentinel*, states that a certain cure for the poisoning of the *Rhus toxicondendron* is a decoction of the leaves of the *Grindelia hirsuta* and *robusta.*

Detection of the Adulteration of Citric with Tartaric Acid.—The similitude of the physical characters of these acids, when the crystals are bruised, permits of this adulteration in commerce. It is easily detected by pouring over a horizontal glass plate a thin layer of a slightly saturated solution of caustic potass, and then projecting on this a portion of the mixture of doubtful crystals. In a few seconds the tartaric acid crystals whiten, become opaque, being covered with microscopical crystals of bitartrate of potassa. The citric acid crystals continue diaphanous, being partly dissolved in the alkaline solution. The relative quantities of the two acids may thus be easily appreciated. The same means may be applied to a powder formed by exactly mixing the two acids. The object-glass of a microscope being wetted with the solution is then powdered with some of the suspected substance. A crowd of minute acicular crystals is produced from the tartaric acid, while the diaphanous citric acid disappears in the solution.—*London Pharm. Journ. from Bulletin de Therap.*

Pharmacy.

SOAP OF IODIDE OF POTASSIUM WITH GLYCERINE.

By Therault.

Glycerine at 28° or 30°,	1000	grammes.
Animal soap in powder,	50	"
Dry iodide of potassium in powder,	130	"

Dissolve both in water. Mix all in a marble mortar and stir well for fifteen minutes, and flavor with oil of bitter almonds, 2 grammes.—*Bulletin Gén. de Thérapéutique.*

STEARATE OF QUINIA AND SODA WITH GLYCERINE.

By Therault.

Stearate of quinia,	4	grammes.
Animal soap,	4	"
Glycerine,	32	"

Melt in a water bath. Mix in a marble mortar, stir well some minutes, and flavor with oil of bitter almond, q. s.—*Idem.*

IODO TANNATE OF LEAD.

Iodine,	2 parts.
Tannin,	14 "

Dissolve each, and mix; then add to a solution of acetate of lead. Collect the precipitate, wash and dry it.—*Idem.*

SEDATIVE PILLS.

Assafœtida,	4 grammes.
Sulphate of morphia,	20 centigrammes.

Make thirty pills. Take one or two before going to bed. These pills are excellent for quieting a dry cough.—*Idem.*

SYRUP OF IODIDE OF MANGANESE.

Crystallized sulphate of manganese,	16 ʒ
Iodide of potassium,	19 "
Sugar and water, each a sufficient quantity.	

Dissolve the sulphate of manganese and iodide of potassium each in three fluid ounces of cold water, containing two drachms of syrup, and mix them in a glass stopped bottle, and after the crystals of sulphate of potash cease to precipitate, throw the solution on a filter of fine muslin, and allow it to pass into a pint bottle containing twelve ounces of powdered sugar. When the solution has ceased to pass, wash and filter with a little water, and then add sufficient of that fluid to make the whole measure one pint. Finally agitate the bottle until the sugar is all dissolved. This preparation contains about one drachm of solid iodide of manganese to each fluid ounce, which is the strength of the officinal solution of iodide of iron.

The dose varies from ten drops to half a fluid drachm.

PILLS OF IODIDE OF MANGANESE.

M. Hannon recommends these to be made by mixing equal quanties of iodide of potassium and dried sulphate of manganese, and forming a mass with honey, which should be divided into pills, each containing four grains. They should be kept in a well stopped bottle. The dose is one pill daily, gradually increased every three days to six pills. They are then omitted eight days, after which their use is resumed.

REMEDY FOR ASTHMA.

By Dr. J. H. Simms, of Wilmington, Delaware.

℞ Potassii Iodid,	ʒ ij.
Ext. Lobelia fluid,	℥ j.
Aquæ font,	℥ xv.

M. Fiat Solut. Dose—a tablespoonful to a wineglassful three times a day.

OILED SILK.

Is best prepared by coating silk with boiled linseed oil, and drying it in a warm room. Two or three successive coats should be applied, each being perfectly dry before the next is put on.

PHOSPHATE OF MANGANESE.

Sulphate of manganese,	4	ounces.
Phosphate of soda,	5	"
Water, a sufficient quantity.		

Dissolve the sulphate and phosphate severally in two pints of water, mix the solutions, wash the precipitated phosphate, till the sulphate of soda is removed, press it between the folds of bibulous paper, and dry it a moderate temperature.

FORMULÆ FOR THE PREPARATION OF THE PRINCIPAL COLLYRIUMS USED IN OPTHALMIA—EMPLOYING GLYCERINE INSTEAD OF WATER.

By Dr. Foucher.

Pure Glycerine,	30	grammes.
Borax,	2 to 4	"
Pure Glycerine,	30	"
Sulphate zinc,	1 to 3	"
Pure Glycerine,	30	"
Sulphate Copper,	1 to 4	"
Pure Glycerine,	30	"
Tinct. Iodide,	4 to 8	"
Pure Glycerine,	30	"
Per Chlorid. Iron,	1 to 4	"
Pure Glycerine,	30	"
Tannin,	1 to 4	"
Pure Glycerine,	30	"
Calomel,	2 to 4	"
Pure Glycerine,	30	"
Laudanum,	2 to 4	"

[*Bulletin Gén. de Thérapéutique.*

ROBINEAUD'S ELIXIR OF CITRO-LACTATE OF IRON.

Mr. Robineaud, of Bordeaux, has published the following formulæ for this elixir, which originated with him:

Dissolve in a porcelain dish two parts of lactate of iron and 70 parts of distilled water, by the aid of a moderate heat, then add two parts of citrate of iron, which will readily dissolve, add the liquid to 50 parts of alcohol (80°), and 90 of simple syrup contained in a flask, flavor with two parts of the tincture of lemon-peel, with two of tincture of canella, and six drops of the tincture of cloves, and finally color with caramel.—*Journal de Pharmacie de Bordeaux.*

PILLS OF IODIDE OF IRON AND QUINIA.

By M. Augieras.

Iodine,	5 grammes.
Iron reduced by Hydrogen,	2 "

Mix the iodide and iron in a mortar; when well mixed add

Sulphate Quinia,	3 gram. 40 cent.

Triturate until the combination has passed to a pulverent state, and make 200 pills. In some cases combine

Extract Gentian,	10 grammes.
Digitalis in Powder,	10 "

[*Idem.*

TREATMENT OF WHOOPING COUGH.

Distilled water,	125 grammes.
Water of orange flowers,	8 "
Syrup of peony,	30 "
Syrup of belladonna,	10 "
Ammonia,	6 drops.

A spoonful every hour during four or five days, and afterwards every two hours.—*Répertoire de Pharmacie.*

Editorial.

OUR JOURNAL.—With this number we close the Second Volume of the *Journal of Materia Medica.* The support it has received from the profession the past year has been greater than the year previous, and the commendations from the most eminent men in the profession, as well as from Foreign and American journals, are ample assurance that the *Journal* as conducted is capable of doing good,—has really done good. A wide field is yet unexplored, and we shall continue the same line of investigation of indigenous plants.

Dr. Lee will contribute monthly to its pages until the list of indigenous remedies, and the plan indicated by him at the commencement, is completed. In connection with these essays we shall continue the analysis of such as have not been analyzed; explaining the relations which preparations of each should hold to the crude material; making it an important feature in determining their quality and uniformity of active principle. The time and labor involved in these experiments are much more than is usually estimated, and few will be found willing to devote it to this branch of Science. The advantages of correct analysis, when properly considered, none can question. Without it we know nothing more of the natural combinations of plants than our daily observations concerning their remedial effects in certain cases teach. In this way they have received a general classification, and should be subdivided or grouped according to their respective elements and the indications they are capable of fulfilling. No two possess the same identical properties, but each has qualities peculiar to itself. No two species of the same genus have precisely similar properties. Each has a range of application peculiar to itself, depending upon principles variously associated, and the influence each exerts in the combination.

It is only by a full understanding of the elements of a plant that practitioners are able to adapt the remedy to the many different pathological conditions, and form such combinations as their judgment may suggest.

Connected closely with this subject is that of the cultivation of medicinal plants, and the development of the active principles, concerning which we have made some highly interesting experiments, to be given the public through the pages of the *Journal* as they are completed.

For terms, see Prospectus. Bound Volumes for 1859 and 1860 will be forwarded for $1.00 each, postage paid.

THE BALTIMORE JOURNAL OF MEDICINE is the title of a new journal to be published bi-monthly, and to contain 100 pages at least. Dr. Edward Warren, late Editor of the *North Carolina Medical Journal*, and now Prof. of Materia Medica and Therapeutics in the University of Maryland, will edit it. He has a high reputation as a journalist, which is a sufficient guarantee of its success, and commends it to the confidence and support of the medical profession of that State.

THE UNIVERSITY OF MARYLAND commenced its session on the 15th of last month, with an Introductory Lecture by the Professor of Materia Medica and Therapeutics, Dr. Edward Warren.

The Class is one of the largest that ever assembled in Baltimore, and everything promises a most harmonious and successful session. We are pleased to state that North Carolina is well represented, and that these students are from most of the southern States. To our personal friends everywhere, who have interested themselves in our behalf, we return our most cordial thanks, assuring them that their kindness is fully appreciated; and that, should an opportunity ever offer, it shall be returned with interest.—*North Carolina Medical Journal.*

NEW MEDICAL JOURNAL.—We have received the prospectus of a new monthly journal of medicine, to be published under the auspices of the Berkshire Medical Society, entitled the *Berkshire Medical Journal.* It is to be edited by Drs. Wm. Henry Thayer and R. Cresson Stiles, Professors in the Berkshire Medical College, both of whom are well fitted for the post with which they have been entrusted. It will be the object of the Journal, says the Prospectus, "to advance, as far as practicable, the interests of rational medicine, extending the conquests of positive science over the domain of tradition." The first number is to be issued on the first of January, 1861.

DR. GIBBS' SECOND CIRCULAR.—The undersigned would respectfully tender his thanks to the Editors of those medical journals who have so kindly noticed his proposed enterprise, in regard to the publication of a *Year-Book of American Contributions to Medical Science and Literature.* He is confident that such a work is needed by the profession, and is demanded by the honor of American medicine. In America, there are no *Abstracts* or *Retrospects* corresponding with those of *Ranking* or *Braithwaite.* These, though valuable productions, are in no manner representatives of American medicine. The gleanings in these are almost entirely confined to journal literature, whereas it is proposed to give in the *Year-Book* a synopsis of all medical matters of importance found in journals, Society transactions, monographs, books, &c., pertaining to medicine having an American origin, and published during the year immediately preceding. As stated in a former circular, to fulfill his design, the undersigned wishes all medical journals, Society transactions, and medical books, of recent issue, sent to his address. A few are yet wanting, to which omission he asks the attention of authors and publishers. What he wishes more particularly to say at present is, that he cannot publish without a greatly *increased subscription list.* To American physicians he appeals in behalf of American medicine, and trusts they will promptly respond to his former circular. Otherwise his enterprise must fail for want of encouragement. Subscribers' names, books, &c., to be directed to

O. C. GIBBS, M. D., Frewsburg, Chautauquay Co., N. Y.

THE PHYSICIAN'S POCKET MEMORANDUM FOR 1861. By C. H. CLEAVELAND, M. D. Second Revised Edition. Cincinnati, Ohio.

We have received the above useful article, which every physician who has used them fully appreciates. We give some of its principal points of usefulness:

1. It contains a full Classification of Medicines used in practice—with their Action on the system—their mode of Preparation—and the Doses of each form of preparation.

2. It contains a full list of Abbreviations used in writing prescriptions, together with the words or phrases abbreviated, and an English translation. This enables even those who are not intimately acquainted with the languages to read the prescriptions in any book with readiness.

3. Full directions are given for the immediate management of all Accidents and Emergencies, with the directions arranged in *alphabetical* order, for convenience of reference. This part of the book has been found to be of great utility.

The third division contains full directions for the treatment of cases of Poisoning, together with a very full list of *Poisons and their Antidotes.*

4. Full and definite directions are given in regard to making Post Mortem examinations of all parts of the body.

5. The best modes of Preserving or Embalming bodies for delays in burial, for transportation, or for dissection, are carefully explained.

6. Careful directions, with a plain Rule for the Prescription of Medicines.

7. This division of the book contains a Calender of the entire year so arranged and ruled as to take the place of the Day-Book of Accounts, and to record the visits to *Sixty* patients a day. No Day-Book is needed where this is used, and much larger space is allowed for this record of Practice than is allowed in any similar work.

8. There are a large number of blank pages, designed to be used as a General Memorandum, and in such a way, and for such purposes as the desires of each individual may indicate.

The Memorandum is made of the best paper, and substantially bound in flexible binding, with *tuck, pocket*, place for *pencil*, and the usual arrangements of a Pocket-Book.

The *amount* of printed matter is fully equal to that in ordinary small volumes, being nearly an hundred pages in fine type; and yet with all the superiorities of value and expense over similar works, it is sold for only *one dollar* a copy.

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MYRICA CERIFERA.

Bayberry.

Found in damp places in many parts of the United States; is very abundant in New Jersey. The bark of the root is officinal.

MEDICAL PROPERTIES.

Astringent and stimulant, and in large doses is apt to occasion emesis. Successfully employed in scrofula, jaundice, diarrhea, dysentery, and other diseases where an astringent stimulant is indicated. Beneficial as a gargle in sore mouth and throat.

PREPARATIONS.

Fluid Extract	Dose, 1 to 2 Drams.
Myricin	" 2 to 10 Grains.

INFUSION OF BAYBERRY.

Fluid Extract	Two Ounces.
Water	Ten Ounces.

Dose—Three-quarters to one-and-a-half ounces.

TINCTURE OF BAYBERRY.

Fluid Extract	Four Ounces.
Diluted Alcohol	Twelve Ounces.

Dose—Half to one ounce.

NEPETA CATARIA.

Catnip.

Catnip is a native of Europe, and is widely naturalized in this country. The names of this plant, in all languages, indicate the fondness of the cats for it, upon whom it is said to exert an aphrodisiac influence. The tops and leaves are officinal.

MEDICAL PROPERTIES.

Carminative and diaphoretic in warm infusion. Used in febrile diseases, in flatulent colic, nervous headache, hysteria and nervous irritability.

PREPARATION.

Fluid Extract	Dose, 2 to 4 Drams.

INFUSION OF CATNIP.

Fluid Extract	Four Ounces.
Water	One Pint.

Dose—Two to four ounces.

MIXTURE OF CATNIP AND SAFFRON.

Fluid Extract of Catnip	Two Ounces.
“ “ “ Saffron	One-and-a-half Oz.

Dose—One-and-a-half to three drams. Popular remedy in colds, febrile and exanthematous diseases to which infants and young children are subject.

CATNIP MIXTURE.

Fluid Extract of Catnip	Six Drams.
“ “ “ Valerian	Four “
“ “ “ Scullcap	“ “

Dose—One to three drams. Excellent in nervous headache, restlessness, and many other nervous symptoms

OPIUM.

Opium is prepared from the unripe capsules of the *Papaver Somniferum*, and presents many varieties, as the Turkey or Smyrna, the East Indian or Bengal, the Egyptian, &c.; of which, the first is the best, and affords the largest proportion of morphia.

MEDICAL PROPERTIES.

The Fluid Extract of opium (Aqueous) is of the same strength as laudanum, and is largely used in its stead; is anodyne in its action, promotes sleep, allays spasms and convulsions, and is valuable in nervous irritability. It can be used where laudanum or opium is generally applicable, without the unpleasant effects that usually follow from either. The fluid opium is denarcotized; prepared according to the formula of Prof. Proctor.

PREPARATION.

Fluid Extract of Opium (Aqueous)	Dose 10 to 60 Drops.

WINE OF AQUEOUS OPIUM.

Fluid Extract	Two Ounces.
Sherry Wine	Fourteen Ounces.

Dose—One to four drams.

PAPAVER SOMNIFERUM.

Poppy.

Supposed to be a native of Persia. The dried capsules are the parts used in medicine.

MEDICAL PROPERTIES.

The Poppy heads, though analogous to opium in medical properties, are exceedingly feeble. They are often given internally to calm irritation, to promote rest, and produce, generally, the narcotic effects of opium.

PREPARATIONS.

Fluid Extract	Dose, 1-2 to 1 Dram.
Solid Extract	" 3 to 10 Grains.
Pills	2 Grains each.

SYRUP OF POPPY.

Fluid Extract	Four Ounces.
Syrup	Twelve Ounces.

Dose—Two to four drams.

PHYTOLACCA DECANDRA.

Poke.

The Poke is abundant in all parts of the United States, as well as in the north of Africa and south of Europe. The leaves, berries and root are used in medicine, but the two latter only are mentioned in the Pharmacopeia. The root is the most active.

MEDICAL PROPERTIES.

It is a slow emetic, purgative, and somewhat narcotic. Used in chronic and syphilitic rheumatism, and for allaying syphilitic pains. It is said to be a sure cure for syphilis in all its stages, without the use of mercury. Acts as an alterative in scrofula and scrofulous diseases.

PREPARATIONS.

Fluid Extract	Dose, 10 to 30 Drops.
Solid Extract	" 1 to 4 Grains.
Phytolaccin	" 1-4 to 1 Grain.
Pills of Phytolacca	1 Grain each.
" " Phytolaccin	1-2 Grain each

TINCTURE OF POKE.

Fluid Extract	Four Ounces.
Diluted Alcohol	One Pint.

Dose—Half to one dram.

SYRUP OF POKE.

Fluid Extract	Two Ounces.
Syrup	Fourteen Ounces.

Dose—One to two drams.

COMPOUND WINE OF POKE.

Fluid Extract	Half Ounce.
White Turpentine	Half Ounce.
Sherry Wine	Two Pints.

Dose—Half to one dram.

OINTMENT OF POKE.

Solid Extract	Two Ounces.
Lard	Half pound.

COMPOUND PILLS OF POKE.

Solid Extract of Poke	Two Drams.
" " " Stillingia	One Dram.
" " " Stramonium	Eight Grains.

Mix, and divide into sixty pills. Dose—One pill every two, three or four hours. Useful in osteocopus, mercurial or syphitic pain in the bones, rheumatism, syphilis, and scrofula.

PIPER ANGUSTIFOLIUM.

Matico.

This plant was discovered on the 9th of December, 1824, by the Spanish soldier whose name it bears. He was bleeding to death when he accidentally caught hold of the plant and brought some of the leaves in contact with the wound, which immediately arrested the hemorrhage.

MEDICAL PROPERTIES.

Principally styptic, also stimulant. Of advantage in epistaxis, leucorrhea, menorrhagia, chronic diarrhea, and diseases of the mucous membranes. As a local styptic it acts in the same manner as agaric.

PREPARATION.

Fluid Extract	Dose, 1-2 to 2 Drams.

TINCTURE OF MATICO.

Fluid Extract	Eight Ounces.
Diluted Alcohol	Two Pints.

Dose—Two to eight drams.

INFUSION OF MATICO.

Fluid Extract	Half Ounce.
Water	Half Pint.

Dose—One to two ounces.

SYRUP OF MATICO.

Fluid Extract	Four Ounces.
Diluted Alcohol	" "
Syrup	Eight "

Dose—Two to four drams.

INFUSION OF MATICO AND SENNA.

Fluid Extract of Matico	Two Drams.
" " " Senna	Two Drams.
Water	One Pint.

Dose—One-and-a-half to three ounces. *Waternough.*

PIPER CUBEBA.

Cubebs.

Native of Java and other East India islands, where it grows wild in the woods. The dried unripe fruit is the officinal portion.

MEDICAL PROPERTIES.

Cubebs is gently stimulant, with particular direction to the urinary organs; has the power of arresting excessive discharges from the urethra; used principally in the treatment of gonorrhea and gleet; also used beneficially in leucorrhea, abscess of the prostate glands, piles, and chronic bronchial inflammation, &c.

PREPARATIONS.

Fluid Extract of Cubebs	Dose, 1-2 to 1 1-2 Drams.
" " " " Etherial	" 1 to 2 Drams.
Solid Extract	" 2 to 20 Grains.
Pills of Ext. Cubebs and Copaiba	3 Grains each.
" " " " " " and Citrate of Iron	3 " "
" " " " " Alum	3 " "
" " " " " Ext. of Rhatany and Iron	3 " "
" " Ext. Cubeba	2 Grains each.

TINCTURE OF CUBEBS.

Fluid Extract	Two Ounces.
Diluted Alcohol	One Pint.

Dose—One to two drams.

MIXTURE OF CUBEBS AND ERGOT.

Fluid Extract of Cubebs	Five Drams.
" " " Ergot	One-and-a-half Drams.
Cinnamon Water	Half Dram.
Powdered Sugar	One Dram.

Dose—One dram. In gonorrhea, gleet, leucorrhea, &c.

PIPER NIGRUM.

Black Pepper.

This plant grows wild in Cochin-China and various parts of India. The berries are officinal.

MEDICAL PROPERTIES.

The Black Pepper is a warm carminative stimulant, having the property of producing general arterial excitement. Its chief medicinal application is to excite the languid stomach and correct flatulence.

PREPARATIONS.

Fluid Extract	Dose, 10 to 40 Drops.
Pills of Piperin	Half Grain each.

TINCTURE OF BLACK PEPPER.

Fluid Extract	Two Ounces.
Diluted Alcohol	One Pint.

Dose—Half to one-and-a-half drams.

SYRUP OF BLACK PEPPER.

Fluid Extract	Four Ounces.
Syrup	Twelve Ounces.

Dose—Quarter of a dram.

COMPOUND PILLS OF PIPERIN.

Pil. Hydrarg	One Grain.
Piperin	Two Grains.
Sulphate of Quinia	Two Grains.
Syrup	Sufficient.

Dose—One to be taken morning, noon and night. *Harth.*

PODOPHYLLUM PELTATUM.

Mandrake.

The Peltatum is the only species strictly belonging to this genus. Found exclusively in America. The root is the officinal portion.

MEDICAL PROPERTIES.

It is a certain cathartic; in large doses an emetic, alterative, anthelmintic, hydragogue and sialogogue. It rouses the liver to vigorous action, determines the blood to the surface, stimulates the kidneys, promotes expectoration, augments the glandular functions, and cleanses the intestinal canal of all irritating substances. In small doses it acts as a powerful alterative. Useful in scrofulous and syphilitic diseases, hepatic affections, dysmenorrhea, rheumatism, gonorrhea; also administered beneficially in jaundice, dropsies, dysentery, diarrhea, bilious, remittent and intermittent fevers, puerperal fever, typhoid fever, and all glandular enlargements. Its range of application is perhaps more extensive than any other cathartic medicine, and is indicated in all cases where the use of mercury is indicated.

PREPARATIONS.

Fluid Extract	Dose, 1-2 to 1 Dram.
" " Compound	" 1 to 2 Drams.
Solid Extract	" 3 to 12 Grains.
Podophyllin	" 1-8 to 1-4 and 1 to 3 Grains.
Pills of Podophyllin	1-2 Grain.
" " Ext. Podophyllum	1 Grain.
" " Podophyllin and Blue Mass	3 Grains.

TINCTURE OF PODOPHYLLUM.

Fluid Extract	Three Ounces.
Alcohol	Thirteen Ounces.

Dose—One-and-a-half to four drams.

1.

COMPOUND PILLS.

Solid Extract of Podophyllum	Half Dram.
Podophyllin	Ten Grains.

Mix, and divide into ten pills. Dose—One, every three hours

2.

Podophyllin	One Dram.
Scammony	One "
Gamboge	One "

Castile Soap	Half Dram.

Mix well, and divide into 120 pills. Dose—One or two.

3

Solid Extract Mandrake	One Ounce.
" " Dandelion	" "
" Conium	" "

Mix. Divide into three-grain pills. Dose—Two to three. Valuable in hepatic and bilious difficulties.

4

Podophyllin	Four Grains.
Iridin	Four "
Strychnia	One-and-a-half Grains.
Solid Extract of Belladonna	Five Grains.
Conserve of Roses	Sufficient.

Mix, and form twenty pills. Dose—One, three times a day, using in combination, active diuretic infusions. Useful in urethral strictures and recent diseases of the prostate glands.

Podophyllin	One Part.
Leptandrin	Ten Parts.
Sugar	Ten Parts.

Dose—Two grains. Excellent alterative in dyspepsia.

Podophyllin	Four Grains.
Blue Mass	Twenty Grains.

Mix, and make into eight pills.

Podophyllin	Half Dram.
White Turpentine	Half "
Carbonate of Iron	One "

Mix well, and divide into thirty pills. *Eclec. Med. Journal.*

Podophyllin	One Dram.
Scammony, in Powder	One "
Gamboge, " "	One "

Rub together for half an hour, and add

Castile Soap	Half Dram.

Beat into a mass, and make 120 pills. *Eclec. Med. Journal.*

MANDRAKE COMPOUND.

Compounded of Mandrake, Senna and Jalap.

POLYGONUM PUNCTATUM.

Water Pepper.

The Polygonum is found growing in nearly all parts of the United States, in low grounds, ditches, among rubbish, and about brooks and water courses. The whole plant is officinal, and has a pungent, biting, acrid taste.

MEDICAL PROPERTIES.

Stimulant, diuretic, emmenagogue, antiseptic, and vesicant. Used in colds, coughs, gravel, uterine diseases, &c.

PREPARATIONS.

Fluid Extract	Dose, 10 to 60 Drops.
Solid Extract	" 2 to 3 Grains.

TINCTURE OF WATER PEPPER.

Fluid Extract	Four Ounces.
Diluted Alcohol	One Pint.

Dose—Half to two drams, three or four times a day.

INFUSION OF WATER PEPPER.

Fluid Extract	Half Ounce.
Water	One Pint.

Dose—Half to one ounce.

COMPOUND PILLS OF WATER PEPPER.

Dried Sulphate of Iron	One Dram.
Cimicifugin	One Dram.
Iridin	Fifteen Grains.
Solid Extract of Water Pepper	Sufficient.

Mix, and divide into sixty pills. Dose—One pill every two or three hours. These pills are emmenagogue, and exert an especial influence on the female organs of generation.

POLYGALA SENEGA,

Seneka.

The root of this indigenous plant is the part used in medicine. Usually called Seneca Snakeroot.

MEDICAL PROPERTIES.

Seneka is a stimulating diuretic and expectorant, and in large doses emetic and cathartic. It excites more or less all the secretions. It is peculiarly useful in chronic catarrhal affections, the secondary stages of croup, and in peripneumonia.

PREPARATION.

Fluid Extract	Dose, 20 to 40 Drops.

INFUSION OF SENEKA.

Fluid Extract of Seneka	One Ounce.
Water	One Pint.

Dose—One to one-and-a-half ounces.

SYRUP OF SENEKA

Fluid Extract	Four Ounces.
Syrup	Twelve Ounces.

Dose—Half to one dram.

SYRUP OF SENEKA, SQUILL. AND IPECAC.

Fluid Extract of Seneka	Two Drams.
" " " Squill	Two "
" " " Ipecac	Four "
Syrup	Three Ounces.

Dose—One dram every three hours. This combines the expectorant properties of the seneka and squill, with the relaxing effect of the ipecac.

SYRUP OF TOLU, WITH SENEKA. BELLADONNA. &c.

Fluid Extract of Seneka	One Dram.
" " " Belladonna	Half Dram.
" " " Ipecac	Thirty Drops.
Syrup of Tolu	Three-and-a-half Ounces.
Syrup	Seven Drams.
Sherry Wine	One Dram.

Dose—One dram three times a day, freely using gum water acidulated with lemon juice. In coughs.

1.

EXPECTORANT COMPOUNDS OF SENEKA.

Fluid Extract of Seneka	Two Drams.
Iodide of Potash	Two "
Antimonial Wine	Four "

Syrup of Tolu	One-and-a-half Ounces.
Water	Three-and-a-half Ounces.

Dose—One dram.

2.

Fluid Extract of Seneka	Two Drams.
" " " Ipecac	One Dram.
Honey	Two Ounces.
Water	Six Ounces.

Dose—One dram.

3

Fluid Extract of Seneka	Three Drams.
" " " Squill	Half Dram.
Syrup of Tolu	Two Drams.
Paregoric	Two Drams.
Carbonate of Ammonia	Twenty Grains.
Water	Four-and-a-half Oz.

Dose—One dram.

POPULUS TREMULOIDES.

American Poplar.

This tree is common in Lower Canada, and in the Northern and Middle States. The bark is officinal.

MEDICAL PROPERTIES.

Tonic and febrifuge; has been used in intermittent fever with advantage. An infusion is reputed a valuable remedy in debility, want of appetite, feeble digestion, chronic diarrhea and worms. It is said to possess active diuretic properties.

PREPARATION.

Populin.......................................Dose, 4 to 8 Grains.

PRINOS VERTICILLATUS.

Black Alder.

This species of Prinos grows in all parts of the United States, from Canada to Florida. The bark is officinal, though sometimes the berries are used medicinally for the same purposes.

MEDICAL PROPERTIES

The Black Alder has been used with good effect in jaundice, diarrhea, intermittent fever, and other diseases connected with a debilitated state of the system, especially gangrene and mortification. It is a popular remedy in gangrenous or flabby and ill-conditioned ulcers, and in chronic cutaneous eruptions, in which it is given internally, and applied locally in the form of a wash or poultice.

PREPARATION.

Fluid Extract	Dose, 1 to 2 Drams

TINCTURE OF BLACK ALDER.

Fluid Extract	Two Ounces.
Diluted Alcohol	One Pint.

Dose—Two to four drams.

SYRUP OF BLACK ALDER.

Fluid Extract	Four Ounces.
Syrup	Twelve Ounces.

Dose—One to two drams.

LOTION OF BLACK ALDER.

Fluid Extract	Three Ounces.
Water	Eight Ounces.

COMPOUND INFUSION OF BLACK ALDER.

Fluid Extract of Black Alder	Two Drams.
" " " Golden Seal	One Dram.
Water	One Pint.

Dose—Four fluid ounces. Valuable in dyspepsia.

PRUNUS VIRGINIANA.

Wild Cherry.

This is one of the largest productions of the American forest, flourishing most where the soil is fertile and the climate temperate. The inner bark is the part employed in medicine.

MEDICAL PROPERTIES.

Tonic and stimulant in operation on the digestive organs, at the same time exercising a sedative influence on the circulatory and nervous systems.

It is useful in the convalescent stages of inflammatory attacks, and in many pulmonary diseases, imparting tonicity without exciting, unduly, the heart and blood vessels. It is of general use in phthisis, scrofula and dyspepsia.

PREPARATIONS.

Fluid Extract of Wild Cherry	Dose, 2 to 4 Drams.
" " " " " Compound	" 1-2 to 2 Drams.
Prunin	2 to 6 Grains.
Wine of Wild Cherry	

INFUSION OF WILD CHERRY.

Fluid Extract	Half Ounce.
Water	One Pint.

Dose—Two ounces, two to four times a day.

SYRUP OF WILD CHERRY.

Fluid Extract	Three Ounces.
Syrup	Thirteen Ounces.

Dose—Two to drams to one ounce.

CHERRY COMPOUND.

Compounded of Cherry, Horehound, Lettuce, Veratrum, Bloodroot.

PYROLA ROTUNDIFOLIA.

Wintergreen.

Common in damp and shady woods, throughout various parts of the United States. The whole plant is used in medicine.

MEDICAL PROPERTIES.

Tonic, astringent, diuretic, and anti-spasmodic. Used in a carcinomatous or scrofulous taint of the system, in leucorrhea, and, both internally and externally, in various cutaneous eruptions. Said to be valuable in many urinary affections, as gravel, hematuria, and ulceration of the bladder.

PREPARATION.

Fluid Extract	Dose, 1 to 2 Drams.

INFUSION OF WINTERGREEN.

Fluid Extract	Two Ounces.
Water	One Pint.

Dose—Two to three ounces. Also used as wash.

QUERCUS ALBA.

White Oak

The White Oak is a forest tree attaining the height of from sixty to ninety feet, growing throughout the Union, but is more abundant in the middle States. The bark is officinal.

MEDICAL PROPERTIES.

Tonic, astringent and alterative. As an astringent it is very valuable; given in intermittent fevers, obstinate and chronic diarrhea, used as a gargle, and in baths for children. Applied externally as an ointment to ill-conditioned ulcers, piles, &c.

PREPARATIONS.

Fluid Extract	Dose, 1-2 to 1 Dram.
Solid Extract	" 10 to 20 Grains.
Pills	2 Grains each.

TINCTURE OF WHITE OAK.

Fluid Extract	Two Ounces.
Diluted Alcohol	One Pint.

Dose—Half to one ounce.

COMPOUND INFUSION OF WHITE OAK.

Fluid Extract of White Oak	One Ounce.
" " " Blue Flag	Two Drams.
" " " Gentian	Two Drams.
Water	Seven Ounces.

Dose—Six drams.

SYRUP OF WHITE OAK.

Fluid Extract	Two Ounces.
Syrup	Fourteen Ounces.

Dose—Four drams to one ounce.

GARGLE OF WHITE OAK.

Fluid Extract	One-and-a-half Ounces.
Alum	Half Dram.
Brandy	One Pint.

Ellis.

RHAMNUS CATHARTICUS.

Buckthorn.

This plant is a native of Europe, and is occasionally met with in this country. European practitioners hold it in high esteem. The berries and juice are possessed of active properties.

MEDICAL PROPERTIES.

A powerful hydragogue and purgative. Seldom used alone.

PREPARATION.

Fluid Extract....................................	Dose, 1 to 1 1-2 Dram.

SYRUP OF BUCKTHORN.

Fluid Extract..................................	Four Ounces.
Syrup..	Twelve Ounces.

Dose—Two ounces.

* * *

RHEUM PALMATUM.

Rhubarb.

The species from which this medicinal drug is obtained inhabit the great plains of Tartary, the Steppes of Siberia and the great ranges of mountains lying between these and the northern part of India. The root is the part used in medicine.

MEDICAL PROPERTIES.

Used as a purgative in mild cases of diarrhea, and cholera infantum; as a stomachic and tonic in dyspepsia, accompanied with debilitated condition of the digestive organs; as a purgative for infants it is valuable and is well adapted to a variety of children's complaints.

PREPARATIONS.

Fluid Ext. of Rhubarb..........................	Dose,	1-2 to 1	Dram.
" " " " Aromatic..................	"	1-2 to 1	"
" " " " and Senna..................	"	1-2 to 1	"
Solid Extract..................................	"	2 to 10	Grains.

Pills of Ext. Rhubarb	1 Grain each.
" " " " and Magnesia	2 Grains "
" " " " and Iron	3 " "
" " Rhubarb Compound (U. S. P.)	4 " "
" " Ext. Rhubarb and Blue Mass	3 " "

TINCTURE OF RHUBARB.

Fluid Extract	Three Ounces.
Essence of Cardamom	Half Ounce.
Diluted Alcohol	Two Pints.

Dose—Half to one-and-a-half ounces.

INFUSION OF RHUBARB.

Fluid Extract	One Ounce.
Spirit of Cinnamon	Two Ounces.
Water	Eighteen Ounces.

Dose—One to three ounces.

SYRUP OF RHUBARB.

Fluid Extract	Three Ounces.
Syrup	Fourteen Ounces.

Dose—Two-and-a-half to five drams.

TINCTURE OF RHUBARB AND GENTIAN.

Fluid Extract of Rhubarb	Four Ounces.
" " " Gentian	Two Ounces.
Diluted Alcohol	One Pint.

Dose—Two to four drams.

WINE OF RHUBARB.

Fluid Extract of Rhubarb	Two Ounces.
" " " Canella	One Dram.
Diluted Alcohol	Two Ounces.
Sherry Wine	One Pint.

Dose—Two-and-a-half to four drams.

PILLS OF BLUE PILL, SODA, &c.

Blue Pill	Nine Grains.
Solid Extract of Rhubarb	Two-and-a-half Grains.
Bicarbonate of Soda	Twelve Grains.
Aromatic Syrup of Rhubarb	Sufficient.

Divide into twelve pills. Dose—One, two or three times a day, as an alterative, in derangement of the liver. *Dr. Hartshorne.*

PILLS OF RHUBARB AND SULPHATE OF IRON.

Solid Extract of Rhubarb	One-and-a-half Drams.
Sulphate of Iron	Half Dram.
Soap	Two Scruples.
Distilled Water	Sufficient.

Mix, and divide into forty pills. Dose—Three or four at bed time.

RHUBARB PILLS.

Solid Extract of Rhubarb	One Scruple.
Blue Mass	One Scruple.
Pulverized Ipecac	Eight Grains.

Mix, and divide into ten pills. Dose—One to two pills. A mild purgative.

RHUS GLABRUM.

Sumach.

Found extensively in the United States, growing in old neglected fields, along fences, and on the borders of woods. The bark and berries are officinal.

MEDICAL PROPERTIES.

Tonic, astringent, antiseptic and diuretic. Valuable in gonorrhea, leucorrhea, diarrhea, dysentery, hectic fever, and scrofula.

PREPARATIONS.

Fluid Extract	Dose, 1 to 2 Drams.
Rhusin	" 1 to 2 Grains.

TINCTURE OF SUMACH.

Fluid Extract	Four Ounces.
Diluted Alcohol	Thirteen Ounces.

Dose—Half to one ounce.

GARGLE OF SUMACH.

Fluid Extract	Two Ounces.
Water	Eight Ounces.

Useful in quinsy and ulceration of the mouth and throat; also as a wash for ringworms, tetters, offensive ulcers, &c.

RUBUS VILLOSUS.

Blackberry.

Of this extensive genus, not less than twenty species are indigenous to the United States. The roots only are officinal.

MEDICAL PROPERTIES.

Tonic and strongly astringent. An excellent remedy in diarrhea, dysentery, cholera-infantum, relaxed conditions of the intestines of children, passive hemorrhage from the stomach, bowels and uterus, and in colliquative diarrhea.

PREPARATIONS.

Fluid Extract	Dose, 1-2 to 1 Dram.
Solid Extract	" 4 to 6 Grains.
Pills	2 Grains each.

TINCTURE OF BLACKBERRY.

Fluid Extract	Two Ounces
Diluted Alcohol	One Pint.

Dose—Two to four drams.

INFUSION OF BLACKBERRY.

Fluid Extract	One Ounce.
Water	One Pint.

Dose—One ounce

SYRUP OF BLACKBERRY.

Fluid Extract	Four Ounces.
Syrup	Twelve Ounces.

Dose—Half to one ounce.

WINE OF BLACKBERRY.

Fluid Extract	Two Ounces.
Wine	Eight Ounces.

Dose—Half to one-and-a-half drams.

RUMEX CRISPUS.

Yellow Dock.

This plant is a native of Europe, introduced into this country, where it grows wild in pastures, dry fields, waste grounds, &c. The root is officinal.

MEDICAL PROPERTIES.

Alterative, tonic, mildly astringent and detergent. Useful in scorbutic and syphilitic affections, leprosy, elephantiasis, &c.

PREPARATIONS.

Fluid Extract	Dose, 1 to 2 Drams.
Rumin	" 4 to 8 Grains.
Solid Extract	" 4 to 8 Grains.
Pills of Solid Extract	2 Grains each.

SYRUP OF YELLOW DOCK.

Fluid Extract	Four Ounces.
Syrup	Twelve Ounces.

Dose—Half to one ounce.

RUTA GRAVEOLENS.

Rue.

This plant is a native of the south of Europe, but is cultivated in our gardens. The whole herb is active, but the leaves are usually employed.

MEDICAL PROPERTIES.

Its action is chiefly directed to the uterus; in moderate doses proving emmenagogue, and in large doses producing a degree of irritation in that organ which sometimes determines abortion. It has been successfully used in flatulent colic, hysteria, epilepsy, and is an efficient vermifuge.

PREPARATIONS.

Fluid Extract	Dose, 20 to 40 Drops.
Solid Extract	" 2 to 4 Grains.
Pills	2 Grains each.

TINCTURE OF RUE.

Fluid Extract	Four Ounces.
Diluted Alcohol	Four Ounces.

Dose—Thirty to sixty drops. *Beral.*

SYRUP OF RUE.

Tincture of Rue	Two Ounces.
Distilled Water	Seven "
Syrup	Seven "

Dose—Half to one dram. *Beral.*

MIXTURE OF RUE AND SQUILL.

Fluid Extract of Rue	One Ounce.
Oxymel of Squill	Half Ounce.

Dose—Twenty-five to forty drops. In hysteric affections

Pierquin.

SALIX ALBA.

Willow.

The White Willow has been introduced into this country from Europe, and is now very common. There are not less than a hundred and thirty species of this genus. The bark is officinal.

MEDICAL PROPERTIES.

Tonic and astringent, and has been employed as a substitute for cinchona, in intermittent fever. Useful in chronic diarrhea and dysentery. The *Salicin* is tonic, anti-spasmodic and febrifuge. It is less likely to offend the stomach and affect the nervous system than quinia.

PREPARATION.

Salicin	Dose, 2 to 10 Grains.

SANGUINARIA CANADENSIS.

Bloodroot.

The Bloodroot grows abundantly throughout the whole United States, flowering early in the spring. All parts of the plant are active, but the root only is officinal.

MEDICAL PROPERTIES.

Valuable as an emetic, narcotic, and stimulant. In small doses it stimulates the digestive organs, and accelerates the circulation, while in large doses it produces nausea and consequent depression of the pulse. Used in typhoid pneumonia, catarrh, pertussis, scarlatina, rheumatism, jaundice, dyspepsia, &c. Considered a specific in the early stages of croup. The Sanguinarina possesses the same properties. The Sanguinarin acts as a tonic, hepatic and alterative. May be employed to advantage in pulmonary diseases, hooping cough; as a sternutatory, and as a local application to indolent ulcers.

PREPARATIONS.

Fluid Extract	Dose, 5 to 15 and 40 to 60 Drops.
Solid Extract	" 1-2 to 1 1-2 and 2 1-2 to 5 Grains.
Sanguinarina	" 1-30 to 1-10 Grains.
Sanguinarin	" 1-4 to 1 and 1-2 to 2 Grains.
Pills of Sanguinaria	1-2 Grain and 1 Grain each.
" " Sanguinarin	1-2 Grain and 1 Grain each.

TINCTURE OF BLOODROOT.

Fluid Extract	Four Ounces.
Diluted Alcohol	Two Pints.

Dose—Half to one dram; as an emetic, four to eight drams.

INFUSION OF BLOODROOT.

Fluid Extract	Half Ounce.
Water	One Pint.

Dose—Two to four drams.

SYRUP OF BLOODROOT.

Fluid Extract	Eight Ounces.
Acetic Acid	Four Ounces.
Syrup	Two-and-a-quarter Pints.

Dose—One to two drams.

COMPOUND TINCTURE OF BLOODROOT.

Fluid Extract of Bloodroot	Two Ounces.
" " " Black Cohosh	Four Ounces.
" " " Poke	One Ounce.

Dose—Half to one dram.

VINEGAR OF BLOODROOT.

Fluid Extract	Four Ounces.
Distilled Vinegar	Two Pints.
Alcohol	One Ounce.

Dose—Twenty to forty drops.

SYRUP OF BLOODROOT COMPOUND FOR COUGHS.

Fluid Extract of Bloodroot	Two Ounces
“ “ “ Squill	Two “
“ “ “ Ipecac	Two “
Balsam of Tolu	One-and-a-half O
Paregoric	Three Ounces.
Syrup	Three Pints.

Dose—One dram when the cough is troublesome.

MIXTURE OF BLOODROOT AND HYDROCYANIC ACID.

Fluid Extract of Bloodroot	One Dram.
“ “ “ Ipecac	One Dram.
“ “ “ Wild Cherry	One-and-a-half Ounces.
Hydrocyanic Acid (Medicinal)	Sixty Drops.
Sulphate of Morphia	Three Grains.
Diluted Alcohol	Three Drams.
Sherry Wine	Three Drams.
Syrup	Three-and-a-half Ounces.

Dose—One dram, two or three times a day. Valuable in chronic diseases, in allaying the cough in tuberculosis, and in all pulmonary catarrhal diseases unattended with pain. *H. Green.*

Sanguinarin	Twelve Grains.
Caulophyllin	“ “
Solid Extract of Cimicifuga	“ “

Make into four-grain pills. Efficacious in amenorrhea. dysmenorrhea and other functional disorders of the female generative system.

SCILLA MARITIMA.

Squill.

The Squill grows in the countries bordering on the Mediterranean. The bulb is the officinal portion.

MEDICAL PROPERTIES.

Squill is expectorant, diuretic, and in large doses, emetic and purgative. As an expectorant, it is used both in cases of deficient and superabundant secretion from the bronchial mucous membrane. It is used in dropsy to increase the secretery action of the kidneys.

PREPARATIONS.

Fluid Extract of Squill	Dose, Expectorant and Diuretic,	2 to 6 Drops.
" " " "	" Emetic	12 to 24 Drops.
" " " " Compound		10 to 20 Drops.
Pills of Squill Compound (U. S. P.)		3 Grains each.

TINCTURE OF SQUILL.

Fluid Extract	Two Ounces.
Diluted Alcohol	One Pint.

Dose—Twenty to forty drops.

SYRUP OF SQUILL.

Fluid Extract	One Ounce.
Syrup	One Pint.

Dose—Quarter to half a dram.

MIXTURE OF SQUILL AND IPECAC.

Fluid Extract of Squill	One Dram.
" " " Ipecac	Two Drams.

Dose—Ten to thirty drops.

MIXTURE OF SQUILL AND CONIUM.

Fluid Extract of Squill	One Dram.
" " " Conium	One Dram.
Water of Ammonia	Three Drams.

Dose—Ten to forty drops.

MIXTURE OF SQUILL AND HYOSCYAMUS.

Fluid Extract of Squill	Half Dram.
" " " Hyoscyamus	Two-thirds Dram.
Tincture of Myrrh	One-and-a-half Drams.
Water	One Ounce.

Dose—Half to one-and-a-half drams.

WINE OF SQUILL.

Fluid Extract	One Ounce.
White Wine	One Pint.

Dose—Half to one ounce.

VINEGAR OF SQUILL

Fluid Extract	Two Ounces.
Diluted Acetic Acid	One Pint.

Dose—Twenty to forty drops.

COMPOUND SYRUP OF SQUILL.

Hive Syrup.

Fluid Ext. Squill Compound	Eight Ounces.
Tart. Ant. and Potassa	Forty-Eight Grains.
Syrup	Two-and-a-half Pints.

Dose—Ten drops to one dram, according to age.

SQUILL COMPOUND.

Compounded of Squill and Seneka.

SCUTELLARIA LATERIFLORA.

Scullcap.

Scullcap is an indigenous herb, flowering in July and August. The whole plant is officinal.

MEDICAL PROPERTIES.

Scullcap is a valuable nervine. Those who have long used it, claim for it tonic properties, which give strength as well as quiet to the system, and that it does not, like other nervines, leave the system in an excited and irritable condition. It has also sudorific and diuretic properties. Used in tic-doloureux, St. Vitus dance, convulsions, tetanus, as well as in ordinary diseases of the nerves.

PREPARATIONS.

Fluid Extract	Dose, 1-2 to 1 Dram.
" " of Scullcap Compound	" 1-2 to 1 Dram.
Scutellarin	" 2 to 6 Grains.
Pills of Scutellarin	1 Grain each.

INFUSION OF SCULLCAP.

Fluid Extract	One Ounce.
Water	One Pint.

In doses of a wine-glassful three times a day, it has entirely cured tic-doloureux.

SCULLCAP COMPOUND.

Compounded of Scullcap, Ladies's Slipper, Hop, Lettuce.

SENECIO AUREUS.

Life Root.

This is an indigenous perennial plant, growing on the banks of creeks and in low marshy grounds, throughout the northern and western parts of the Union, flowering in May and June. The root and herb are the officinal parts.

MEDICAL PROPERTIES.

Diuretic, pectoral, diaphoretic and tonic. An excellent remedy in gravel and other urinary affections; is said to be a specific in strangury; very efficacious in promoting menstrual discharges, and a valuable agent in the treatment of female diseases. The ***Senecin*** possesses, to a high degree, the virtues of the plant whence it is derived.

PREPARATIONS.

Fluid Extract	Dose, 1-2 to 1 Dram
Senecin	" 3 to 5 Grains.

INFUSION OF LIFE ROOT

Fluid Extract	One Ounce.
Water	One Pint.

Dose—One to four ounces.

Senecin	Four Grains.
Aletrin	" "
Sulphate of Iron	" "

Make into two-grain powders. In chlorosis accompanied by amenorrhea.

Senecin	Ten Grains.
Sulphate of Quinia	Six Grains.
Solid Extract of Belladonna	Three Grains.
Conserve of Roses	Sufficient.

Make into ten pills. In dysmenorrhea.

Senecin	Six Grains.
Geraniin	" "

Dose—Two to four grains. In menorrhagia.

SIMARUBA EXCELSA.

Quassia.

This species inhabits Jamaica and the Carribbean Islands, where it is called *bitter ash*. The wood is the part used in medicine.

MEDICAL PROPERTIES.

It possesses in the highest degree all the properties of simple bitters. It is purely tonic, invigorating the digestive organs, with little excitement of the circulation, or increase of animal heat. Particularly adapted to dyspepsia and to that debilitated state of the digestive organs which sometimes succeeds acute disease.

PREPARATIONS.

Fluid Extract	Dose, 1-2 to 1 Dram.
Solid Extract	“ 3 to 5 Grains.
Pills	1 Grain each.

TINCTURE OF QUASSIA.

Fluid Extract	Two Ounces.
Diluted Alcohol	Two Pints.

Dose—Four to eight drams.

INFUSION OF QUASSIA.

Fluid Extract	Two Drams.
Water	One Pint.

Dose—Four to six drams.

COMPOUND INFUSION OF QUASSIA.

Fluid Extract of Quassia	Half Ounce.
“ “ “ Snakeroot	Half “
“ “ “ Orange Peel	Half “
Water	Two Pints.

Dose—Half to one-and-a-half ounces.

WINE OF QUASSIA.

Fluid Extract of Quassia	Half Ounce.
“ “ “ Orange Peel	Two Drams.
Sherry Wine	One-and-a-half Pints.

Dose—Two to four ounces.

SMILAX OFFICINALIS.

Sarsaparilla.

This species is indigenous, growing in swamps and hedges in the Middle and Southern States. The root is the part used in medicine.

MEDICAL PROPERTIES

Possesses a high reputation as an alterative in the treatment of chronic rheumatism, scrofulous affections, cutaneous affections, syphiloid diseases, and that depraved condition of the general health to which it is difficult to apply a name.

PREPARATIONS.

Fluid Extract of Sarsaparilla, Rio Negro	Dose,	1 Dram.
" " " " Compound (U. S. P.)	"	1 "
" " " " and Dandelion	"	1 "
Solid Extract " " Amer.	"	5 to 20 Grains.
" " " " " Compound	"	5 to 20 "
" " " " Rio Negro	"	5 to 15 "
" " " " " Compound	"	5 to 15 "
Pills of each of the Solid Extracts		3 Grains each.

INFUSION OF SARSAPARILLA.

Fluid Extract	One Ounce.
Water	One Pint.

Dose—Two to four ounces.

SYRUP OF SARSAPARILLA.

Fluid Extract	Two Ounces.
Syrup	Fourteen Ounces.

Dose—One to two ounces.

Syrup of the Sarsaparilla Compound made similarly, and administered in like doses.

SARSAPARILLA COMPOUND.

Compounded of Sarsaparilla, Prince's Pine, Liquorice, Mezereon, Sassafras, Yellow Dock, and Bittersweet.

SOLANUM DULCAMARA.

Bittersweet.

Common in Europe and North America. The root and stalk have medicinal properties, though the latter only is officinal.

MEDICAL PROPERTIES.

Chiefly used in syrup or infusion in cutaneous diseases, scrofula, jaundice, syphilitic, rheumatic and cachectic affections, leucorrhea and obstructed menstruation. Possesses feeble narcotic powers and increases the secretions of the kidneys and the skin. It is especially beneficial in the treatment of cutaneous eruptions of a scaly character. Antaphrodisiac properties are ascribed to it, rendering it useful in mania connected with strong venereal proponsities.

PREPARATIONS.

Fluid Extract	Dose, 1-2 to 1 Dram.
Solid Extract	" 3 to 8 Grains.
Pills	2 Grains each.

INFUSION OF BITTERSWEET.

Fluid Extract	One Ounce.
Water	One Pint.

Dose—One to two ounces, three or four times a day

COMPOUND INFUSION OF BITTERSWEET.

Fluid Extract of Bittersweet	One Ounce.
" " " Burdock	Half "
" " " Sassafras	" "
" " " Yellow Dock	" "
Water	One Pint.

Dose—One to two ounces.

COMPOUND SYRUP OF BITTERSWEET.

Same as above, substituting syrup for the water.

SYRUP OF BITTERSWEET.

Fluid Extract	Four Ounces.
Syrup	Twelve Ounces.

Dose—Four drams.

MIXTURE OF BITTERSWEET.

Fluid Extract of Bittersweet	Two Ounces.
" " " Yellow Dock	" "
" " " Stillingia	" "
Syrup	One-and-a-half Pints.

Dose—One to two drams, in scrofulous and syphilitic affections.

SPIGELIA MARILANDICA.

Pink Root.

Native of the southern and southwestern States. The root alone is recognized by the Pharmacopeias.

MEDICAL PROPERTIES.

Powerful anthelmintic. In large doses acts as a cathartic, though unequal and uncertain in its operation. Over doses excite the circulation and determine to the brain, giving rise to vertigo, dimness of vision, &c. Should be given with other cathartics, as the narcotic effects are less when the medicine purges.

PREPARATIONS.

Fluid Extract of Pink Root	Dose, 1-2 to 1 1-2 Drams.
" " " " " Compound	" 1-2 to 2 Drams.
" " " " " and Senna	" 1-2 to 1 Dram.

INFUSION OF PINK ROOT.

Fluid Extract	Half Ounce.
Water	One Pint.

Dose—Two to six ounces.

PINK ROOT COMPOUND.

Compounded of Pink Root, Senna, Savin, and Manna.

SPIRÆA TOMENTOSA.

Hardhack.

A beautiful shrub, with spikes of rose-colored flowers, and leaves of a dark-green color above and white beneath. Common in the United States.

MEDICAL PROPERTIES.

Tonic astringent. In consequence of its tonic power, it is peculiarly adapted in cases of debility; and from the same cause, should not be given during the existence of inflammatory action or febrile excitement. As an astringent it is administered in diarrhea, cholera-infantum, and other complaints where astringents are usually indicated, and is said to be less liable to disagree with the stomach than other astringents. Is an excellent remedy for summer complaints of children.

PREPARATIONS.

Fluid Extract	Dose, 4 to 20 Drops.
Pills	2 Grains each.

STILLINGIA SYLVATICA.

Queen's Root.

The plant is found growing in pine-barrens and sandy soils from Virginia to Florida; in Mississippi and Louisiana, flowering from April to July. The root is the officinal portion.

MEDICAL PROPERTIES.

Stillingia has reputation as an alterative, and as such is used in syphilitic affections, ordinarily requiring the use of mercury; is emetic and cathartic in large doses. It has been used with efficacy in secondary syphilis, scrofula, cutaneous diseases, chronic hepatic affections, and other complaints generally benefited by alteratives. Its success leaves no doubt that it is possessed of very valuable properties.

PREPARATIONS.

Fluid Extract of Stillingia	Dose, 5 to 15 Drops.
" " " " Compound	" 1-2 to 1 Dram.
Stillingin	" 2 to 5 Grains.
Pills of Stillingin	1 Grain each.

TINCTURE OF STILLINGIA.

Fluid Extract	Two Ounces.
Diluted Alcohol	One Pint.

Dose—1-3 to 1 1-2 drams.

INFUSION OF STILLINGIA.

Fluid Extract	One Ounce.
Water	One Pint.

Dose—One to two drams.

SYRUP OF STILLINGIA.

Fluid Extract of Stillingia	Three Ounces.
" " " Prickly Ash	One-and-a-half Ounces.
Syrup	Six-and-a-half Ounces.

Dose—Half to one-and-a-half drams.

COMPOUND SYRUP OF STILLINGIA.

Fluid Extract of Stillingia	Two Ounces.
" " " Bloodroot	Two "
" " " Cherry Bark	Two "
Balsam of Tolu	One-and-a-half Ounces.
Syrup	Two-and-a-half Pints.

Dose—One to two drams in chronic, bronchial and catarrhal affections.

STILLINGIA COMPOUND.

Compounded of Stillingia, Turkey Corn, Blue Flag, Prince's Pine, Prickly Ash, Yellow Dock.

STRYCHNOS IGNATIA.

St. Ignatius' Bean.

This is a native of Cochin-China, the Phillipine Islands, and other parts of Asia.

MEDICAL PROPERTIES.

It is applicable in the wide range of symptoms known as dyspeptic. It has a tonic, stimulating effect on all the organs connected with the digestive functions, by its acting directly on their nervous energies, exciting and equalizing their weakened and disturbed action. It possesses a large amount of strychnia, the active principle of the Nux Vomica.

PREPARATIONS.

Fluid Extract	Dose, 5 to 10 Drops.
Solid Extract	" 1-2 to 1 1-2 Grains.
Pills	1-2 Grain each.

WINE OF IGNATIA.

Fluid Extract	One Ounce.
Sherry Wine	One Pint.

Dose—One to two drams.

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BY JOHN ELLIS, M. D.,

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B. T. Babbitt's Pure Concentrated Potash.

Warranted double the strength of common Potash, and superior to any Saponifier in market; put up in cans of 1-lb., 2-lbs., 3-lbs.. 6-lbs., and 12-lbs., with full directions for making Hard and Soft Soap. One pound will make fifteen gallons of Soft Soap. No lime is required. Consumers will find this the cheapest Potash in market.

B. T. Babbitt's Medicinal Saleratus.

A perfectly pure and wholesome article, free from all deleterious matter, so prepared that, as the circular accompanying the Saleratus will show, nothing remains in the Bread when baked but common Salt, Water and Flour. Put up neatly in papers, 1-lb., ½-lb. and ¼-lb.

B. T. Babbitt's Concentrated Soft Soap.

One box costing One Dollar will make 40 gallons of handsome Soft Soap by simply adding boiling water.

B. T. Babbitt's Concentrated Sal Soda.

A new article exclusively for the South. Sal Soda or Washing Soda cannot be sent South during warm weather, as it deliquesces or melts. I dry out the water, and put up the Sal Soda in 1-lb. papers, "warranted to stand the warmest climate." One pound is equal to four pounds of ordinary Sal Soda or Washing Soda, consequently it is much cheaper. The dealer saves 65 per cent on freight, as he does not have to pay freight on water.

Ask your storekeeper for B. T. Babbitt's Concentrated Sal Soda, in 1-lb. papers.

B. T. Babbitt's Soap for Family Use.

One pound of this Soap is equal to three pounds of ordinary Family Soap. One pound will make three gallons of handsome Soft Soap. It will remove paint, grease, tar, and stains of all kinds. It will not injure the fabric; on the contrary, it preserves it. It will wash in hard or soft water. But little labor is required where this Soap is used. Machinists and Printers will find this Soap superior to anything in market. If your storekeeper does not keep the above goods, send $5 by mail, and I will send a package of either article, or an assorted box containing a part of each article, as you may direct. Send the name of your post-office, also the State and County in which you reside, with directions for shipping. Address

B. T. BABBITT,

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NEW YORK.

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PILLS OF NUX VOMICA AND QUINIA.

Solid Extract of Nux Vomica	Six Grains.
Sulphate of Quinia	Twenty-four Grains.
Ext. Hyoscyamus	Twelve Grains.

Mix, and divide into twenty-four pills.

PILLS OF NUX VOMICA AND ALOES.

Solid Ext. Nux Vomica	Half Grain.
Aloes	Three-quarters Grain.
Solid Ext. Rhubarb	" " "

Make two pills.

SYMPLOCARPUS FŒTIDUS.

Skunk Cabbage.

This is an indigenous plant, growing abundantly in various parts of the United States. The root is officinal.

MEDICAL PROPERTIES.

Stimulant, antispasmodic, expectorant, and slightly narcotic. In large doses it will occasion nausea, vomiting, vertigo, and dimness of sight. Useful in asthma, hooping cough, nervous irritability, hysteria, epilepsy, chronic catarrh, pulmonary and bronchial affections.

PREPARATION.

Fluid Extract	Dose, 20 to 80 Drops.

TINCTURE OF SKUNK CABBAGE.

Fluid Extract	Three Ounces.
Diluted Alcohol	One Pint.

Dose—Half to one dram.

INFUSION OF SKUNK CABBAGE.

Fluid Extract	One Ounce.
Water	One Pint.

Dose—One to two ounces.

SYRUP OF SKUNK CABBAGE.

Fluid Extract	Two Ounces.
Syrup	Eight Ounces.

Dose—Two to three drams.

COMPOUND TINCTURE OF SKUNK CABBAGE.

Fluid Extract of Skunk Cabbage	One Ounce.
" " " Lobelia	" "
" " " Bloodroot	" "
" " " Pleurisy Root	" "
" " " Ginger	" "
Water	One Pint.
Alcohol	Three Pints.

Dose—Two to four drams, in croup, cough, asthma, &c., to promote expectoration and remove tightness across the chest.

TARAXACUM DENS-LEONIS.

Dandelion.

This species grows spontaneously in most parts of the globe. The Pharmacopeias recognize the root only as medicinal, this being by far the most efficacious part.

MEDICAL PROPERTIES.

Valuable alterative, tonic, diuretic, and aperient. It has a specific action on the liver, exciting it to secretion when languid. Used with good effect in dyspepsia, diseases of the liver and spleen, and in the irritable condition of the stomach and bowels.

PREPARATIONS.

Fluid Extract of Dandelion	Dose, 1 to 2 Drams.
" " " " Compound	" 1 to 2 "
" " " " and Senna	" 1 to 2 "
Solid Extract	" 10 to 20 Grains.
Pills of Extract of Dandelion	3 Grains each.

INFUSION OF DANDELION

Fluid Extract	Two Ounces.
Water	One Pint.

Dose—Four to six ounces.

MIXTURE OF DANDELION.

Fluid Extract of Dandelion	Two Ounces.
" " " Peppermint	Two Ounces.
Clarified Honey	One Ounce.
Water	Four Ounces.

Dose—Two to three drams.

PILLS OF DANDELION AND BLUE MASS.

Solid Extract of Dandelion	Five Scruples.
" " " Uva Ursi	Two-and-a-half Scruples.
Blue Mass	Ten Grains.

Mix, and form ten pills. One to be taken three times a day. In dropsy complicated with disease of the liver.

COMPOUND INFUSION OF DANDELION.

Fluid Extract of Dandelion	Six Drams.
" " " Rhubarb	One-and-a-half Drams.
" " " Hyoscyamus	Twenty-four Drops.
Carbonate of Soda	Half Dram.
Tartrate of Potassa	Three Drams.
Water	Three-and-a-half Ounces.

One-third to be taken three times a day. In dropsical and visceral affections. *Dr. Meigs.*

COMPOUND PILLS OF DANDELION.

1.

Solid Extract of Dandelion	One Ounce.
" " " Mandrake	One "
" " " Conium	One "

Mix, and divide into three-grain pills. Dose—Two or three. Valuable in hepatic and bilious affections.

2.

Solid Extract of Dandelion	One Dram.
" " " Bloodroot	One Dram.
Podophyllin	Half Scruple.
Oil of Peppermint	Five Minims.

Mix, and divide into fifty pills. Dose—One to two, three times a day. Laxative, nauseant and diuretic; of much efficacy in jaundice, hepatic diseases, and affections of the kidneys.

3.

Solid Extract of Dandelion	Three Drams.
Pulverized Nux Vomica	Two Scruples.
Sulphate of Alum	Ten Grains.

Mix, and divide into twenty pills, to be taken, one at night, and one at noon. In dyspepsia.

SYRUP OF DANDELION.

Fluid Extract of Dandelion	Three Ounces.
Syrup	Thirteen Ounces.

Dose—Half to one ounce.

SYRUP DANDELION COMPOUND.

Fluid Extract Dandelion	Twelve Ounces.
" " Boneset	Two Ounces.
" " Ginger	Half Ounce.
Tincture of Cloves	Half Ounce.
Syrup	Five Ounces.
Brandy	Eight Ounces.

Dose—Two to three drams. *J. Stevens.*

DANDELION COMPOUND.

Compounded of Dandelion, Mandrake, Conium.

TRIFOLIUM PRATENSE.

Red Clover.

A biennial plant, common in the United States. The blossoms are officinal.

MEDICAL PROPERTIES.

Highly recommended in cancerous ulcers of every kind, and deep, ragged-edged, and otherwise badly conditioned burns.

PREPARATION.

Solid Extract	To be used at discretion.

OINTMENT OF RED CLOVER.

Solid Extract	Four Ounces.
Lard	Half Pound.

TRILLIUM PENDULUM.

Bethroot.

Common in the Middle and Western States, growing in rich soils, in damp, rocky and shady woods. The root is the part used in medicine.

MEDICAL PROPERTIES.

Astringent, tonic and antiseptic. It has been employed successfully in hematuria, leucorrhea, cough, asthma, and difficult breathing.

PREPARATIONS.

Fluid Extract	Dose, 1 to 3 Drams.
Trilliin	" 4 to 8 Grains.

INFUSION OF BETHROOT.

Fluid Extract	Two Ounces.
Water	One Pint.

Dose—Two to four ounces.

VALERIANA OFFICINALIS.

Valerian.

The Valerian is a European plant, flowering in June or July. The root is officinal.

MEDICAL PROPERTIES.

Valerian is tonic and antispasmodic. It is useful in cases of irregular nervous action, in the morbid vigilance of fevers, in hypochondriasis, epilepsy, and occasionally in intermittent and remittent fevers.

PREPARATIONS.

Fluid Extract	Dose, 1-2 to 1 1-2 Drams.
Solid Extract	" 3 to 10 Grains.
Pills	2 Grains each.

TINCTURE OF VALERIAN.

Fluid Extract	Eight Ounces.
Diluted Alcohol	Two Pints.

Dose—Two to four drams.

INFUSION OF VALERIAN.

Fluid Extract	Half Ounce.
Water	One Pint.

Dose—Two to four ounces.

SYRUP OF VALERIAN.

Fluid Extract	Four Ounces.
Syrup	One Pint.

Dose—Two to four drams.

MEDICAL PROPERTIES.

Astringent, tonic and antiseptic. It has been employed successfully in hematuria, leucorrhea, cough, asthma, and difficult breathing.

PREPARATIONS.

Fluid Extract	Dose, 1 to 3 Drams.
Trilliin	" 4 to 8 Grains.

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Water	One Pint.

Dose—Two to four ounces.

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PREPARATIONS.

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Solid Extract	" 3 to 10 Grains.
Pills	2 Grains each.

TINCTURE OF VALERIAN.

Fluid Extract	Eight Ounces.
Diluted Alcohol	Two Pints.

Dose—Two to four drams.

INFUSION OF VALERIAN.

Fluid Extract	Half Ounce.
Water	One Pint.

Dose—Two to four ounces.

SYRUP OF VALERIAN.

Fluid Extract	Four Ounces.
Syrup	One Pint.

Dose—Two to four drams.

WINE OF VALERIAN.

Fluid Extract	Two Ounces.
Sherry Wine	Fourteen Ounces.

Dose—Half to one ounce.

COMPOUND INFUSION OF VALERIAN.

Fluid Extract of Valerian	One-and-a-half Ounces.
Syrup of Chamomile	One-and-a-half Ounces.
Camphor	Twenty Grains.
Infusion of Cinchona	Two Pints.

Dose—One to two ounces, three times a day. *Saunders.*

AMMONIATED TINCTURE OF VALERIAN.

Fluid Extract	Four Ounces.
Aromatic Spirit of Ammonia	Two Pints.

Dose—One to two drams.

VALERIAN COMPOUND.

Fluid Extract of Valerian	Two Ounces.
" " " Cinchona	Half Ounce.
Carbonate of Ammonia	Two Drams.
Syrup of Ginger	One Ounce.

Dose—Two drams every hour in periodic hemicrania.

Donald Monro.

COMPOUND TINCTURE OF VALERIAN.

Fluid Extract of Valerian	Two Ounces.
Tincture of Castor	One Ounce.
Fluid Extract of Saffron	One Ounce.
" " " Peppermint	Four Ounces.
Diluted Alcohol	Two Pints.

Dose—Half to one-and-a-half drams. *Wirt. Ph.*

VERATRUM VIRIDE.

American Hellebore.

This plant is indigenous to many parts of the United States, usually growing in swamps, wet meadows, and on the banks of mountain streamlets. The rhizoma is the officinal part.

MEDICAL PROPERTIES.

It is slightly acrid, an excellent expectorant, a certain diaphoretic, nervine, and never narcotic, emetic, and arterial sedative, which last is its most valuable and interesting property, and for which it stands unparalleled and unequalled as a therapeutic agent.

PREPARATIONS.

Fluid Extract..Dose:—

Each fluid ounce represents one ounce of crude root, and calculating 60 minims, or 120 drops to the fluid dram, each grain is represented by one minim, or two drops; therefore, for an adult male, begin with two drops, increasing one drop each portion given, or, for greater convenience or certainty of administration, combine in equal proportions with simple syrup, or syrup of squills, and give 4 drops, increasing 1 or 2 drops each portion, till nausea or vomiting ensues, or the pulse is reduced to 65 or 70 beats per minute. For children, begin with 1 drop of Veratrum, combined with equal portions of syrup of squills, and increase 1 drop each portion. When the pulse is sufficiently diminished, then reduce the dose one half—in all cases continuing it a sufficient length of time to prevent any return of the symptoms. Morphine or laudanum with brandy is a perfect antidote for an overdose of Veratrum; or syrup of sulphate of morphine one part, fluid extract of ginger two parts. Dose of this mixture for an adult male, 60 drops every 15 minutes till relieved.

Veratrin....................................Dose, 1-16 to 1-2 Grain.

Pills...1-2 and 1-4 Grain each.

INFUSION OF VERATRUM.

Fluid Extract...............................One Dram.

Water...Eight Ounces.

Dose—Two to four drams each hour. The doses should be too small to produce emesis. *T. C. Miller.*

WINE OF VERATRUM.

Fluid Extract...............................Four Ounces.

Sherry Wine.................................One Pint.

Dose—Twenty to forty drops.

XANTHOXYLUM FRAXINEUM.

Prickly Ash.

This species is indigenous. The leaves and capsules have an aromatic odor. The bark is the officinal portion.

MEDICAL PROPERTIES.

It is a stimulant, tonic and alterative. Used in languid conditions of the system; in rheumatism, chronic syphilis and hepatic derangements. The Xanthoxylin may be used in all cases when it is desired to stimulate and strengthen mucous tissues. A valuable tonic in low typhoid fever.

PREPARATIONS.

Fluid Extract	Dose, 15 to 45 Drops.
Xanthoxylin	" 2 to 6 Grains.
Pills	1 Grain each.

TINCTURE OF PRICKLY ASH.

Fluid Extract	Four Ounces.
Diluted Alcohol	One Pint.

Dose—Half to one-and-a-half drams.

INFUSION OF PRICKLY ASH.

Fluid Extract	One Ounce.
Water	One Quart.

One pint to be taken in divided doses during the 24 hours; in chronic rheumatism.

CLYSTER OF PRICKLY ASH.

Fluid Extract of Prickly Ash	Two Ounces.
" " " Opium	Five Drams.
Water	One Pint.

Xanthoxylin	One Dram.
Cimicifugin	" "
Apocynin	" "
Proof Spirit	One Pint.

Dose—Four drams three times a day in chronic rheumatism.

Xanthoxylin	Six Grains
Hydrastin	" "

Dose—Three grains. Stimulating tonic for children, after diarrhœa, dysentery, and other debilitating diseases.

ZINGIBER OFFICINALE.

Ginger.

This plant is a native of Hindustan, and is cultivated in all parts of India. The flowers have an aromatic smell, and the bruised stems are slightly fragrant; but the root is the portion in which the virtues of the plant reside. The Jamaica ginger is considered the best, and is mainly in use.

MEDICAL PROPERTIES.

Ginger is a grateful stimulant and carminative, often given in dyspepsia, flatulency, and imperfect digestion, as well as in colic, nausea, gout, spasms, cholera-morbus, &c. It is an excellent addition to bitter infusions and the like.

PREPARATION.

Fluid Extract.............................. ...Dose, 1-2 to 1 1-2 Drams.

TINCTURE OF GINGER.

Fluid Extract	Four Ounces.
Diluted Alcohol..............................	Twelve Ounces.

Dose—Two to four drams.

INFUSION OF GINGER.

Fluid Extract.................................	One Ounce
Water..	One Pint.

Dose—One to two ounces.

SYRUP OF GINGER.

Fluid Extract.................................	Two Ounces.
Syrup..	One Pint.

Dose—One to two drams.

MISCELLANEOUS FORMULÆ.

INFUSIONS.

TONIC INFUSION.

Infusion of Cinchona	Two-and-a-half Ounces.
" " Gentian Compound	One Ounce.
Tincture of Cascarilla	Two Drams.
Solution of Sesquicarb. Potassa	Two Drams.

Dose—One ounce twice a day. *Pearson*.

IN GASTRALGIA.

Fluid Extract of Opium Aqueous	Two Drams.
" " " Aconite	Three Drams.
Distilled Water	Four Ounces.

Dose—One to two drams, twice a day, immediately after a meal.

Padiolean

VERMIFUGE INFUSION.

Corsican Moss	Half Ounce.
Boiling Milk	Two Ounces.

Infuse, strain, and add :

Syrup of Wormwood	Ten Drams.

To be taken in one or two portions in the morning, fasting, for three days running, in the treatment of ascarides lumbricoides. The third day, from two-and-a-half drams to half ounce of castor oil to be given an hour after the administration of the vermifuge milk. *T. & R.*

ALKALINE INFUSION.

Hickory Ashes	One Pint
Wood Soot	Four Ounces.
Boiling Water	Half Gallon.

Let them stand twenty-four hours, and decant. Dose—A wineglassful three or four times a day, in lithiasis and dyspepsia. (This was a favorite remedy of Dr. Physick.)

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